Orchard Houses.

RCHARD HOUSES, in certain quarters, constitute a subject which is now attracting no small measure of attention. We can not perceive the same necessity for them here which may be supposed to exist in some other countries, nor do we believe that they will ever become leading objects in horticulture, except among amateurs. One of the chief arguments urged in favor of this mode of growing fruit-trees, especially the plum, the peach, and the nectarine, is the immunity thus afforded against the attacks of the curculio. This argument, to a certain extent, is a sound one, and with many will be sufficient to outweigh all considerations of labor and expense; and that the ends of science may be furthered, it is well that it should be so. It is certain to our apprehension, however, that the "little Turk" will not be so easily turned off. Neither glass, nor bars, nor wire netting will be effectual in keeping him out so long as there is a door to be opened; and once he has effected a lodgment within, he will be sure to make his appearance just at the inopportune moment he is least wanted, whether it be in January or March. This may not take place in an orchard house for several years; but that it will take place, we have not the least doubt. All analogy is in favor of it; and thus, in our plans for an orchard house, we must not forget to make provision for the companionship of this little pest.

Our position is, that as orchard houses become established, the curculio will take up its quarters in them, in greatly lessened numbers to be sure, and under easy control, but still there. Those who go into orchard-house culture must not suppose that they will thereby escape the annoyance of insects. There will be fewer of them, and they will be more readily destroyed; and this will be a great point gained. We wish to do away the impression which we know to have been produced upon the minds of many, that by growing fruit-trees under glass, in pots, they will escape all the annoyances of insects, and half the labor incidental to growing trees in the open air. We could scarcely have believed this, if the fact had not come under our personal observation. We desire to see orchard houses fairly started, and without false impressions so far as we can correct them; and we therefore say to those who purpose embarking in this interesting experiment, that looking after insects, pruning, watering, and other matters necessary to the greatest success in growing fruit-trees in pots, will require no inconsiderable labor and expense.

Opinion seems to be divided in regard to the best mode of constructing orchard houses for our hot climate, and also as to whether it is better to

keep the pots under glass all summer, or to remove them to the open air soon after the fruit is well formed. With our warm climate and clear sun, there would seem to be no necessity at all for growing plums, &c., under glass, except as a matter of amusement for the wealthy; but here we are confronted with the "little Turk" again, who is always an unseemly intruder whenever the subject is mentioned; but we have some doubts lurking in our mind, whether, if we perseveringly bestowed upon trees in the open air the same amount of labor which will be necessary to insure success in the orchard house, we could not secure at least two-thirds of the plum crop of the entire Union. We do not see any reason to hope, however, for any such persevering application of labor, and we therefore return to the orchard house.

So far as the construction is concerned, we are of opinion that it should be on the continuous roof principle, and as flat as is consistent with strength. Provision should be made for an abundant supply of moisture by evaporation, in such manner as to be easily controlled. We need scarcely say anything about providing for ventilation; for of this, in our opinion, there is generally a good deal too much. There will always be plenty of that, if nothing else. If the trees are to remain under glass all summer, (and what is the use of a special orchard house if they are not?) we would call attention to the plan recommended by Mr. Saunders, of placing them in a border divided by brick-work into compartments of the size of large pots. This plan affords sufficient facilities for root pruning, and greatly lessens the labor of watering. We have grown grapes in this way in a very satisfactory manner, and can not perceive why pears and plums could not be grown so too. The only doubt in our mind is, whether these trees will bear the same amount of heat that is congenial to the grape, provided a sufficient amount of moisture is supplied to the atmosphere. If these fruits will not bear the heat, it will be necessary to shade the glass; and then the question arises, whether they will mature kindly and in perfection without the direct rays of the sun. All these points must finally be settled by experience.

If, however, the trees are not to remain under glass during the summer, there can be no necessity for building a special orchard house, unless under some peculiar circumstances; for they can just as well be started in February or March in an ordinary greenhouse or grapery, and removed to the open air about the last of June. In this mode of growing fruit-trees in pots, we have had some experience; and as information on this subject, however meagre, is now eagerly sought, we will state concisely how we grew them. The first dwarf apples and pears we ever grew, we grew in pots, not from choice, but necessity; and all the happy hours we have since enjoyed among our plants and trees have not been sufficient to obscure the pleasure we took in growing those miniatures in pots. Our success was limited at first, in consequence of beginning with large trees: a cause which, we suspect, will produce many failures in orchard-house culture. We finally selected maiden trees, put them into the smallest pots in which we could conveniently get them, and cut them down to about six buds. If the leader grew too vigorously, we pinched it out when some twelve or fifteen inches long, and the laterals we pinched frequently and unsparingly to induce the setting of fruit-spurs: an operation which required close watching and a nice judgment, to prevent the spurs from running into wood.

Watering was carefully attended to, and the trees frequently syringed overhead. To prevent undue evaporation, the sides of the pots were protected by boards or hay, which we found to be especially serviceable. This treatment was continued till fall, at which time the supply of water was gradually lessened, but the leaves never allowed to flag. When the frost had stripped off the leaves, and the wood was thoroughly ripened, the leader was cut in to eight buds, and the laterals to four. The trees were then shifted into larger pots, and placed in the cellar for the winter. They were examined occasionally, and water given when needed, which was not often.

The first season the plants were grown entirely in the open air, but the next they were placed in the greenhouse during February and March. The same system of pinching was pursued during the second and subsequent years. In potting in the fall of the second year, some of the old earth was shaken from the sides of the ball, and portions of the old roots pruned off; and the trees at no time were put in pots measuring over fourteen inches in diameter. In the second year we generally had two or three fine specimens on each tree. When the fruit was well formed, the pots were put outside, and protected as before described.

In re-potting after the second year, the sides, top, and bottom of the ball of earth were pared away, and a portion of the old roots removed. Liquid manure was occasionally applied, and at long intervals lime-water. The trees were not allowed to overbear, ripening too much fruit having proved even more injurious to trees in pots than to those in the open ground; but a uniform crop was easily obtained every year. The trees were examined daily for insects during the early part of the season; the surface soil was frequently stirred with a blunted stick; and the outside of the pots was kept clean by being occasionally washed, for we had an idea at the time that a clean pot was conducive to the health of the tree, and we have seen no reason to abandon it since. Such, in few words, constituted our treatment of the pear; that of the apple and nectarine was, of course, somewhat different.

The reader will probably be glad to know of what our compost consisted. Two things we considered indispensable, and still consider so, namely, charcoal dust and black vegetable mould from the woods. We used to have a heap of rotted sod, a heap of fine old manure protected from the weather, some bone dust, charcoal dust, mould, lime, ashes, &c.; and we do not like to be without them now. The basis of the compost was decayed sod, this, however, being light; to this we added one part of vegetable mould, one part of fine manure, one part of charcoal dust, and a sprinkling of bone dust and ashes. The drainage consisted of about one inch of charcoal, the size of hickory nuts, which we consider the best drainage that can be used. The ingredients of the compost were thoroughly mixed, and frequently turned before being used. With such a compost and the treatment above described, very fine pears, plums, nectarines, &c., can be grown in pots by anybody who has a greenhouse or grapery and a good cellar, or even the latter alone. Such trees, in pots, are beautiful objects placed on the side of walks or on the lawn; and the pleasure of growing them will be a rich compensation for the labor and time bestowed. If any of our readers desire further information in regard to this manner of growing fruit-trees in pots, we shall be happy to give it.

THE PANSY.

BY DANIEL BARKER, SPRINGFIELD, MASS.

The natural order *Violaceæ* comprises a very beautiful genus of small but very pretty and desirable plants, embracing not only the well-known winter-flowering Neapolitan and Russian Violets, but those great favorites of every lover of spring-flowering plants, the *Pansy*, which is a flower universally admired, and perhaps without a rival in the extent to which it is grown. We have found it in the garden of the mansion and the cottage throughout the Eastern and Middle States, and have sent them to every State of the Union. Twenty-five years since it was a mere weed compared to the highly improved and highly prized varieties of the present day. The advance that has been made in it has been such as to induce thousands of ladies and gardeners to procure and grow it. But there are many who complain that they can not grow Pansies; to help these is now my object; and if the few remarks which I have to offer may tend to promote the culture of this beautiful plant, I shall be highly gratified.

April, May, and June are the months when the Pansy is in perfection; the object of the cultivator must therefore be to have his plants in good, healthy condition for flowering at that period. Cuttings may be taken from the middle of August to the end of September, or later; for this purpose select the side-shoots, as they almost invariably make the best plants, and root much sooner than the flowering shoots, which are not unfrequently hollow and quite unfit for making good plants. Never use any kind of glass for covering over the cuttings, but put them in the open border, shading them from the sun and watering them freely during dry weather, until they are sufficiently rooted. The surface-soil should be frequently stirred, and no weeds be allowed to grow among them.

Soon as well rooted, commence to pot them in two- or three-inch pots, according to the quantity of roots, using a compost of good loam, leaf-mould, and very rotten manure, with a portion of good, sharp river-sand, and an inch of broken bones, or small pieces of charcoal, at the bottom of the pots for drainage. After they are potted, place them in a cold frame, shading them during the warmest part of the day until sufficiently established, which will be in about ten days. In this situation they may remain during the winter, giving them as much air as possible during fine weather, and protecting them from severe frosts by banking up round the frames, and covering the sash with mats or straw.

About the first week in March repot some of the strongest and best varieties into six-inch pots, using the same kind of compost as before, with plenty of drainage at the bottom of the pots. In repotting it will be well to remove some of the soil from the ball, but care is necessary to avoid any injury to the delicate fibres. When potted, place them again in the frame, raising them to within six inches of the glass. Admit air as previously, and to make good-shaped plants the pots should be turned round frequently, and the soil stirred upon the surface; by this means the plants become stiff and well formed.

To secure a succession of bloom through the summer months, plants should be planted out in a shady border about the first week in May and the last of June, in a compost the same as recommended for potting.

In planting, place the plants not nearer each other than eighteen inches, and never allow them to become too bushy, or the flowers will deteriorate in size. Liquid manure may be liberally given them, keeping the plants about three main stems. During heavy storms the flowers will require protecting, which can be done by placing a roll of canvas over the bed, which should be fixed in such a manner as to roof up and down at an angle of 45 degrees, which will not only protect them from storms, but likewise from the fierce rays of the sun. Injury from this cause not unfrequently disappoints the hopes of those who cultivate the Pansy, more particularly when they are cultivated in the open border.

I would strongly urge the advantage of growing this beautiful plant in pots, which will render the grower independent of the weather, as well as of unnatural soil, &c.

[It will be perceived that Mr. Barker's plan of growing the Pansy differs from that of Mr. Fry, published last month. The latter prefers to resort to seed each year; and when the seed is carefully saved from choice kinds, a fair proportion of good varieties may be looked for. Mr. Barker, however, prefers to make sure of his choice kinds by propagating them from cuttings, the only way in which the object can be certainly secured. The amateur can try both methods, but he must be careful to secure good seed, or he will be doomed to disappointment. With his article Mr. Barker sent us some specimens of his Pansies, and they were certainly fine.—Ed.]

DESIGN FOR A SMALL VILLA.

BY MYRON B. BENTON, AMENIA, N. Y.

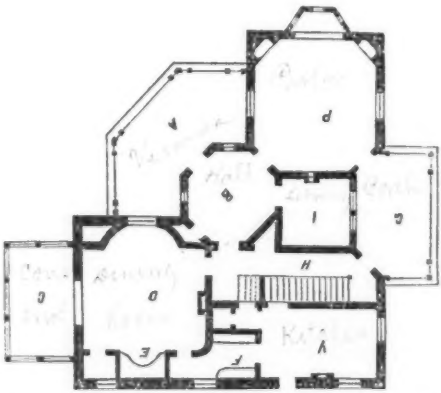
This design is calculated to embrace some of the elegancies that are supposed to belong more appropriately to the villa, in a smaller edifice than usually obtains that name, but at the same time it is attempted to render the interior accommodations convenient. Though a conservatory and verandas are included in the design, the inconvenience and unpleasantness of a dining-room and kitchen in the cellar are avoided.

The principal entrance to the house is from a veranda, through an octagonal hall, which occupies the lower part of the tower. From this open the parlor, library, a cloak-closet, and the side wall. The latter contains the stairway, and opens at the opposite end upon a smaller and more retired veranda. This veranda should overlook the flower-garden, or some other pleasant feature of the grounds. It communicates with the parlor by a door, and with the library by the windows, which open to the floor. The parlor should be connected with the bay-window by an arch. Were the ceiling of the bay-window of the same height, and if the cornice of the room were to extend around both, unbroken by any such division, it would be apt to give an apartment of this form an appearance of irregularity in shape; though this plan is often adopted with good effect in rooms of the ordinary rectangular form. A case of shelves for a cabinet might be fitted at each side of the bay in the niches.

The dining-room opens from the side hall, and connects with the conservatory and veranda by windows opening down to the floor. A recess is

made for the sideboard. Upon one side of it is a china closet, and upon the other a door communicating with the pantry. This place for a door connecting the pantry with the dining-room is deemed preferable. Should it

open more directly into it, at one side of the fire-place, a full view would thus be given, whenever the door was opened, not only of the whole pantry, but through that of the kitchen. This inconvenience is too often overlooked

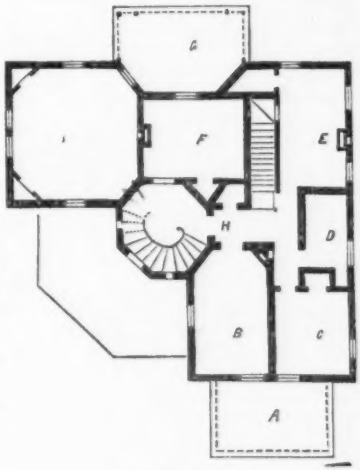


by builders. A house should be so arranged that these views would be cut

off. I have in mind more than one house, in which one may stand—especially in the summer, when doors are not kept carefully closed—at the front doorway, and see, through hall, parlor, and dining-room, what is transpiring in the back kitchen.

The chamber accommodations include six bed-rooms, with convenient closets—two of them open upon the balcony over the conservatory, and two others connect with the covered balcony, or upper veranda. From the bed-room over the kitchen the attic stairway opens, and a flight of winding stairs in the tower leads up to the observatory.

The cost of constructing such a house, with plain finish, would probably be about $3,000.



THE NEGLEY PEAR.

BY WILLIAM HEAVER, CINCINNATI.

In your May number the frontispiece is an engraving of the above-named fruit, and accompanied with a historical tradition of its history and origin, so far as known to the writer, all of which is interesting matter, and which your correspondent would very willingly let pass, did he not honestly believe that the high eulogium on, and the glowing description of, the above-named fruit were likely to mislead and disappoint many of the readers of the *Horticulturist* who are accustomed to rely on your journal as *first-rate authority* in *Pomological matters.*

As a member of the Fruit Committee of the Cincinnati Horticultural Society, having had an opportunity of examining and testing the merits of the above-named variety last fall, I will, as near as I can, give you the character of the fruit as it appeared to us, (with a desire nothing to extenuate nor to set down aught in malice.) The specimens were sent by Mr. Negley expressly for the inspection and examination of the Fruit Committee at the fall exhibition of our Horticultural Society, accompanied with a laudatory communication from Mr. N. Of course, inferior specimens would not be selected for such an occasion ; and as we had at the time over one hundred varieties of *Pears* on exhibition, we had a fair opportunity of judging the merits of the *Negley Pear* by comparison. The opinion of the Committee was, that it scarcely deserved to be classed as second quality.

In appearance it so nearly resembles the Cumberland, that the impression of the Committee was, that it is identical with that variety, although in quality the specimens sent were not equal to some of the Cumberland tested with them ; this, however, might result from the same cause as affected

those sent to Mr. Chas. Downing; but whatever the cause, the fact is proved, that travelling *East* or *West* it does not sustain the high character for quality claimed for it by our Pittsburg pomological friend.

That the late Mr. Ernst should have mistaken some specimens for the Flemish Beauty would be somewhat surprising, did not the writer ingenuously admit that his testing it dispelled the illusion. If any of your readers may imagine that the *Negley Pear*, from the writer's connection of the names, bears in quality any similarity to the *Flemish Beauty*, they will find themselves most egregiously disappointed. It is certainly desirable that new varieties of fruits should have their *good* qualities well ascertained before such extensive prominence is given to them as is accorded the Negley Pear in the last number of the *Horticulturist*.

The Peabody Strawberry is a strong instance of the necessity of caution and discrimination in recommending new varieties of fruits for general cultivation. The writer is not by any means opposed to the introduction of new varieties, but disposed to encourage the desire to raise new varieties from seed; and had he not had the opportunity of judging the merits of the variety under consideration, reading the article would have prompted him to possess it the coming season; but as the case stands, will be content to remain without it, already possessing the Cumberland, of which he will be happy to furnish the editor specimens next fall, for comparison with the Negley, should Mr. N. and the editor desire it.

[We give place to Mr. Heaver's strictures on the Negley Pear, and regret, of course, that there should be any necessity for them. We trust that others, who have had opportunities of testing the quality of the Pear, will give us their opinion fairly. We do not imagine that Mr. Negley has stated more than he honestly believes. We have no personal knowledge of the Pear, and can therefore give no opinion of its merits. The engraving was prepared by our predecessor, and we took it for granted that he had fully satisfied himself of the good qualities of the Pear. Specimens were sent to him, and we hope he will tell us what he thought of them. Mr. Heaver may send us the Cumberland, and we have no doubt that Mr. Negley will send us his seedling, and we shall then be able to tell our readers what, in our opinion, the Negley really is.—Ed.]

GISHURST'S COMPOUND.

BY W., WASHINGTON HEIGHTS, N. Y.

An allusion to the above-named article, by yourself, or one of your contributors, in the April number of your Magazine, has induced me to solicit a small space in one of your next issues, to add my mite of testimony to its merits.

For some time past I have observed in the *Gardener's Chronicle* and other English gardening periodicals, numerous and various attestations of its potency in annihilating the numberless entomological pests with which gardeners have to contend; consequently, as soon as I discovered that it was in the market here, I purchased a box of it of Mr. Alfred Bridgeman, and took it home to experiment with.

After reading the directions, which accompany the box, I concluded I

would commence, as it is said the majority of the most successful business men who have reached the top round of the ladder have commenced, viz., by beginning the ascent at the bottom round first.

Acting on this principle, I took the smallest quantity recommended, viz., 2 oz. to 1 gallon of water, or, which is the same thing, I weighed 3 oz. of the compound, and put it into a pail with 6 quarts of SOFT water : after remaining there for 6 or 8 hours, it was thoroughly dissolved and fit for use.

I then looked around for a favorable, or, rather, an unfavorable subject to experiment upon. I soon found a Bourbon Queen rose, with the lower leaves thickly peppered with red spider, and the young growth at the top as thickly covered with mildew and green fly. I must admit that this is not a very creditable confession for a gardener to make, but assuredly this was the precise condition in which I found her majesty the Queen of the Bourbons, whom I politely escorted and introduced to the new element, "Gishurst's Compound," and then and there gave her a good sousing over head and shoulders for ten or fifteen seconds. Rather rough usage for a Queen, I admit, but more humane than decapitation, after all. I replaced her on her throne; and the next day, in medico-professional style, paid my patient a visit, when I found her as free from her enemies as were the Israelites of old after crossing the Red Sea.

The green fly was perfectly black, the mildew had disappeared, and the spider, if not quite defunct, was in a perfect state of quiescence. I may as well remark here, however, that in about a week the spider made his appearance again; for that reason I would suggest that it would be advisable to make the solution a little stronger for that gentleman, say 3 oz. to the gallon; but for the green fly and mildew, 2 oz. are sufficient, as I have repeatedly tried it on Roses, Pelargoniums, etc. As regards mealy bug and scale, I can not speak experimentally, as, fortunately, I have very few to experiment upon, but these I am satisfied it will destroy by applying from 6 to 8 oz. per gallon of water.

This compound will be found an excellent substitute for sulphur in vineries: instead of scattering sulphur broadcast over floor, leaves, pipes, and flues, (which is very unsightly,) take 2 gallons of this mixture, if mildew appears, and just draw the syringe over the affected foliage, and there will be an end of it. If it appear again, in a week or two, "repeat the dose," as the disciples of Galen say.

And now, Mr. Editor, what think you of some of our pomological enthusiasts investing five dollars in this article to give it a fair trial on that merciless rascal, the plum curculio? My impression is, that two good applications of it, at the right time, would, as Mr. Toodles says, "squelch him."

In this city and Brooklyn conservatories attached to the dwelling are becoming very numerous, and the gardeners, I know, often have trouble in obtaining permission of the ladies of the mansion to "smoke the greenhouse," in consequence of the disagreeable smell which pervades the whole house whenever this operation has to be performed; and frequently, when it is considered necessary to smoke, especially in the early part of the winter, there are, in fact, but few plants that require it, and yet the whole house must be filled with smoke to get rid of them.

When this is the case, dissolve 4 oz. of the compound in 2 gallons of water, and dip the plants in it, as I described in my No. 1 trial; and by fol-

lowing this up, this tobacco smoke nuisance may be at least partially dispensed with.

The liquid, I find, will keep good and fresh for three or four weeks.

[We are obliged to W. for this lively description of his experiments with Gishurst's Compound. There is no person more competent to make such experiments, and none whose testimony may be more implicitly relied upon. We have no doubt the "Queen" will ever hereafter consider him a most faithful and loving subject for having so summarily disposed of her enemies. The suggestion in regard to the "little Turk" is a good one. He has no business here, and ought to be driven from this continent at least. Who will go a "V" on the "Turk?" In the mean time, W., let us hear from you again.—Ed.]

BARTRAM PEAR.

BY W. D. BRINCKLÉ, M. D., OF GROVEVILLE, N. J.

Specimens of this desirable Pear were received by me from Mr. Harmer on the 21st of September, 1859. A dish of them was exhibited at the same time by Mr. Harmer, at the Annual Exhibition of the Pennsylvania Horticultural Society.

Size of Fruit, rather large, two inches and thirteen-sixteenths of an inch long, by two and five-eighths wide; *Form*, obovate; *Skin*, green, becoming yellow, with numerous russet dots and occasionally markings of russet on the side; *Stem*, one inch and an eighth long, by three-sixteenths thick, inserted in a rather flat surface with little or no depression; *Basin*, shallow, slightly plaited; *Calyx*, medium, segments nearly erect; *Core*, medium; *Seed*, rather small, dark brown, with an angle at the inner side of the blunt end; *Flesh*, greenish-yellow, fine texture, buttery; *Flavor*, saccharine, with a delicate aroma; *Quality*, "very good;" *Maturity*, the specimens sent to me were eaten on the 22d of September, but it is said to begin to ripen the last of August; *Wood*, olive-brown; *Leaf*, of ordinary size, glossy, folded, accuminate, with crenate serratures; *Growth*, rather straggling.

The Bartram is an accidental seedling that originated near the old Bartram Garden, on the premises of the late Miss Ann Bartram, grand-daughter of the elder Bartram. She resided on the road leading from the railway bridge over the Schuylkill at Grey's Ferry to the Darby Road, being now embraced within the incorporated limits of the city of Philadelphia.

My attention was first directed to this variety in 1853, by the veteran pomologist, Col. Robert Carr. He described it to me as a very fine variety, larger than the Petre, and eminently worthy of being propagated. I therefore called on Miss Bartram to see the fruit; but it was ripe and gone. I obtained its history, however, from the kind old lady, (who was then living.) She informed me that it originated on a part of her grounds remote from her dwelling. When it came into bearing, she was so much pleased with the size and quality of the fruit, that she determined to transplant the tree to a more suitable and convenient locality. The removal was accomplished, but proved fatal to the original tree. Four small suckers, however, which had sprung up from the root, survived, and were planted in the corners of a quadrangle near the mansion house. These suckers commenced fruiting in 1850.

The neighborhood of this valuable Pear is renowned as having been the birth-place of the far-famed Seckel, the Petre, Kingsessing, Jones, and Lodge ; the original trees of all but the last of these varieties are still standing in their respective native localities.

[We are obliged to Dr. Brincklé for his interesting contribution. His descriptions are always concise and intelligible. We should be glad to have Mr. Harmer send us specimens of the fruit next fall.—Ed.]

ABOUT THE DANDELION.

BY J. STAUFFER, LANCASTER, PA.

This very common plant, that adorns our grass plats and pasture grounds, with its bright, golden-colored flowers, from the first opening of spring until late in September, grows spontaneously in the four quarters of the globe; from near the poles to beneath the equator ; on the margin of rivers and streams, as well as on sterile rocks; has various qualities that are seldom met together in any description, if ever heretofore combined in one.

I shall not stop to describe this very common and well-known plant.

Dr. Gray, in his late Manual of Botany, reverses the old name, "Leontodon taraxacum," no doubt for sufficient reason, to that of *Taraxacum dens-leonis*.

Our common English name, "Dandelion," is a corruption from the French name, "Dent-de-lion," which, like the German name, "Löwenzahn," and the old Greek name, "Leontodon," has its allusion, from the runcinately-toothed leaves, to the tooth or teeth of a lion. Our other common name of "Piss-abed" is also after the French name "Le piss-enlit," derived from its diuretic qualities. The other German names of "Pfaffenröhrlein" and "Dotterbluhmen" are not so clear. Thus much as to its name. Next its properties.

Medicinally.—The pharmacopœias recognize only the root, as being by far the most efficacious part. It should not be employed till full grown, when the aqueous juices have become milky and bitter, in the months of July to September, and either used fresh or when carefully dried.

It yields its active qualities to water by boiling, and is used in the form of decoction, extract, or simple infusion. A crystallizable principle has been extracted from the juice of the root called *taraxacin*. It is bitter and somewhat acrid. The root is slightly tonic, diuretic, and aperient, and seems to have a specific action upon the liver, exciting it when languid to secretion, and resolving its chronic engorgements, and is a popular remedy with many practitioners in this country and in Germany particularly, in derangement of the hepatic apparatus, and of the digestive organs generally. Bitartrate of potassa added to the decoction improves its aperient effect, and aromatics correct a tendency to griping or flatulence. This is a brief statement of its leading *medical* qualities. Then as a

Culinary.—The tender leaves in spring, used in compound salads, are equal to those of Endive or Succory. The fusiform roots are eaten raw as salad by the French, and boiled by the Germans like salsify or scorzonera. Dried and ground into powder, they afford a substitute for coffee, in all respects equal to that of chiccory root. As a

Weed, it is difficult to extirpate, because every inch of root, according to Loudon, will form buds and fibres, and thus constitute a new plant; besides, myriads of seeds are annually wafted over the country by means of the pappus, making the plant more abundant than welcome to the farmer. As

Fodder, swine are fond of it, and goats will eat it, but sheep and cows dislike it, and by horses it is refused. By way of conclusion we will notice it as the

Rustic Oracle, as it is called in the "language of flowers." After blossoming, the inner involucre closes, the slender beak of the seeds elongates and raises up the pappus while the fruit is forming, the whole involucre becomes reflexed, displaying the pappus in a globular head around the central disk, forming what are termed "puff-balls." Who is there that has not delighted in youth to scatter these feathered seeds, by a puff of the breath, to see them carried off like miniature parachutes, and sailing over the grœnsward or meadow, thus wantonly perhaps aiding their distribution? A custom prevailed among rustic swains, when separated from the object of their love, to carefuly pluck one of those feathered spheres, charge each of the little feathers composing it with a tender thought, turn towards the abode of the loved one, blow, and the little aërial travellers were bidden faithfully to convey the secret message to his or her feet. Did they desire to know whether the dear one thought of them, they would blow again, and

if a single egret remained, it was a proof they were not forgotten. But enough of this. I will only add that the Dandelion attracted very early attention. Friend Howitt speaks of it as

> Dandelion, with globe of down,
> The schoolboy's clock in every town,
> Which the truant puffs amain,
> To conjure lost hours back again.

LANDSCAPE ENGINEERING AND GARDENING.

BY GEORGE E. WOODWARD, NEW YORK.

To one who has devoted any thought or attention to Landscape Gardening, the greatest inconsistencies must be apparent between its theory and practice, while it is universally admitted to be worthy of an important rank among the arts, and to require tastes of a high order of cultivation and refinement. Its every-day practitioners, if we may judge by the advertising columns of the newspaper, unite its duties with those of the coachman and the common gardener; both stating that, in connection with their trade or calling, they are prepared to lay out grounds, and do ornamental planting.

In every other department of art, we are unwilling to accept or admire any production from those of inferior taste or skill; not only do we employ the first order of talent, but insist on that of long-established reputation. In Landscape Gardening, this is reversed; and we are ready to admire the work of inferior minds, no matter how much it may lack the principles of beauty or taste.

Now there must be a woeful ignorance existing on what is true beauty or true artistic treatment in Landscape Gardening, or else a liberal disposition to spend money in doing and undoing, experimenting, changing, etc., to find out in the most costly and unsatisfactory manner what is pleasing to our tastes.

If we take the ground that the taste and talent which shall design and superintend our landscape improvements, shall be equal or superior to the taste that is to appreciate them, we shall have made an advance, which financially will be attended with very happy results, and equally as much so artistically; but if we allow ourselves to be persuaded and guided by minds that can draw no distinction between Gardening and Landscape Gardening, can see no difference between a trade and an art, the mechanical and artistical, the practical and the beautiful, we must not expect much else but disappointment. If we desire the love of country life to increase, and the refined and elegant enjoyments of it to be pursued, we should take the same plain, common-sense view of Landscape Gardening that we do of the arts; and either educate ourselves to execute and appreciate it, or look to the education, tastes, and practical abilities of those who make it a profession. In spite of much that has been written to the contrary, we are of the opinion that the principles and practice of Landscape Gardening are plainly within the reach of all who have any desire to acquire them, and they, with the kindred arts of Rural Architecture, and Landscape and Agri-

cultural Engineering, should be made a portion of a finished education. Downing says, that "Ignorance is not bliss, nor is it economy in improving a country place;" and sooner or later, experimental ruralists will find it too true. The expense of rural improvements among those who know, has almost become a proverb. A man with a "weak back" had better not undertake the high improvement of a country place, especially in the blind manner in which such improvements are generally executed. We see every day, in practical Landscape Gardening, the prosecution of work without a plan, a total want of knowledge of the result, and subject to the whims and notions of every presuming critic.

There are otherwise intelligent men, who can not comprehend the possibility of improving a country seat from a plan, who would ridicule the idea of measuring earth-work, or tracing a curve independent of its centre, form no conception of the beautiful aërial perspective effects of color in trees, and utterly incapable of studying an improvement in the abstract. With them, Landscape Gardening is, and always will be, an experiment, which, with constant alterations, never ceases to be an experiment, never fulfils their idea of what is beautiful, is never pleasing, but always suggestive of a heavy expenditure. Landscape Gardening may be properly defined as the application or results of most of the scientific professions; and to study Landscape Gardening without a knowledge of its elements, certainly would require one to have extraordinary natural abilities, and herein may lie the great difficulty in acquiring it. The professional expert brings to his aid, not only the resources of a finished general and mathematical education, but a thorough knowledge of surveying, civil engineering, architecture, drawing, painting, botany, chemistry, and all gardening operations; and these are essentially necessary for a rapid, intelligent, and economical execution of the art.

When an ordinary gardener undertakes Landscape Gardening, it becomes to him a riddle of the most intricate character; and with the impression that it is a part of his trade, he works out by guess-work and experiment a result that can only be successful by the merest chance. Landscape Gardening and common Gardening bear just this resemblance to each other, that Gardening is one essential element of Landscape Gardening, but by no means qualifies one to be successful in its pursuit, until there is added to it a thorough knowledge of the arts of design and construction, and an educated taste and ability.

It can be easily demonstrated, that much of the expense of landscape improvement is owing to the ignorance of those who undertake it. Experiments are costly undertakings, and an expensive manner of studying Landscape Gardening; but there are few persons who will admit that they can not build a house, lay out a country seat, or construct a common road, until they have tried.

[And Mr. W. might have added, "not even then." The above is the beginning of a series of articles on this subject, in regard to which a great many false notions are still prevalent.—Ed.]

A CHAPTER ON MULCHING.

BY W. R. COPPOCK, BUFFALO, N. Y.

Are we not a singular people, fond of extremes, novelty, and innovation? Let any subject strike the popular ear, and it is ridden, "Gilpin" like, without either rhyme or reason; when the fit is off, as suddenly abandoned. A case in point is, that some one suddenly has come to the conclusion that mulching trees is neither useful nor proper! Shade of the ever lamented Downing! tell it not! let it pass into oblivion still-born! Let not so truly valuable an adjunct to the tree-grower be slandered into bad odor thus thoughtlessly. No! no! for all time, on this subject, keep facts in view. Well, indeed, may the ignorant opposers of scientific manipulations eschew treatises when such evanescent flickerings are treated as cool reflections. Because, forsooth, some foolish persons choose to build a haystack around their trees, where bees do congregate, and hornets build their nests, does it follow that a more judicious application should merit the malific thrust thus given? The practice itself is American; the English, from whom we are prone to copy, need no such special mulch. Their climate is so universally moist, that a dry, clear day to them is an exception. With us, on the contrary, our summer months are generally hot and dry. The soil, unless constantly stirred, becomes baked and hard. The occasional showers run from the surface without penetrating any useful depth, and hence vegetation, especially trees recently planted, suffer greatly during that portion of the season when in truth moisture is most needed; the plant ripens prematurely, and early sheds its leaves. There *is* a variety of loam that is always moist, yet never wet, and does not bake or crack. But such soil is not as common as I wish it were, and hence the arboriculturist must exercise his skill in adapting his means to a desired end. But let me record my dissent to this vandalism, and give some reasons therefor. All observing, practical men must know full well that too rapid evaporation is the bane to be guarded against in removing plants of any kind; that shade, synonymous with mulch, is highly necessary in clear weather. For however carefully a tree may be taken up, the greater part of its feeders are destroyed. Thousands of minute fibres thread the soil, and in most instances at great distances and depth, which can not be removed with the plant. The tree thus deprived of its ten thousand suction tubes is placed in a new medium, and the losses it has sustained are attempted ofttimes to be replaced by artificial watering. Here again is an error. Practice fully proves that artificial watering at such times does not remedy the evil, but rather hastens the death of most plants by surfeit and decay at the roots. A pail or two of water, perhaps drawn from the well, and dashed around the plant, is far different from that fluid found in the soil, which has become chemically charged with the natural pabulum necessary to nourish a living tree. But mulch it, prevent excessive, evaporation, preserve the tempered moisture of the soil, by the appliance of some light litter, such as straw, cut grass, chip dirt, etc.; and if you desire to make doubly sure, mulch the body of the tree also, if large, with hay, or straw bandings, or what not; and watch then the sure result. Instance street shade trees—young maples, elms, lindens, &c.—what rapid and splendid growths they frequently make—their roots, one-half buried under a close flagging,

while the balance are under a ten-inch pavement! Is the mulch here prejudicial? Some nine years since, I planted twenty-five ten-year-old cherry-trees; I well recollect being ridiculed for the attempt. No matter; I wanted cherries, and cherries I got. I superintended their lifting, yet with all my care they were sadly mutilated; fortunately, it was a rainy time. They were carried a mile, and planted in holes previously prepared. "*I know how to plant a tree.*" All were mulched, and each tree was wrapped with a hay rope from the collar to the main branches; and even there, as far as possible. All lived; nay, they grew, and although I paid a high price for them, they soon repaid me in fruit and pleasure many fold. Since then, I have transplanted two hundred cherry-trees five years old; seventy of them I mulched with *pea haulm*, and lost not one. The balance were not mulched, and I lost (or they are growing feebly) more than forty. They were all equally well planted in good loamy soil.

Last spring I decided to remove a dozen beautiful dwarf pears into my lawn. They were ten years old, and had borne well for years. The trees were carefully taken up, and as carefully planted. For a time all looked well; but soon, alas! feebleness was plainly visible; a portion of them shed their leaves entirely, and the knowing ones said they were "gone." Not so, however. I mulched the surface of the ground for a circumference of eight feet, and then I mulched the trees. They were ten feet high. Stakes twelve feet long were placed around each tree; the branches were drawn together, and tied with listing, and then a cotton sheet was wound around the whole. Night and morning, with a syringe, the branches were moistened; no water to the roots. In three or four weeks the buds began to swell, and at midsummer they were in full foliage again. The sheet was gradually removed, and during a rainy time entirely so. Some of them made several inches of new wood, while others set some fruit, which, as a matter of course, was taken off. Of the twelve, eleven have entirely recovered. The twelfth, during severe gales, had the sheet badly torn, and so left. It is feeble, and may not recover.

Some years since I made an experiment to test the utility of mulching *specifically*. I took up two dwarf pears, two years old, trimmed their roots and pruned their tops alike, and replanted within ten feet of each other. One I mulched three inches deep with tan-bark; the other was left without anything. In the fall I took up both trees for examination. The mulched tree showed innumerable new rootlets, while the other had no visible sign of any change, other than the granulation of the cut. The mulched tree made plenty of new wood; the unmulched very little—yet both seemed in good health.

At another time I employed a man to take up some fifty pears, four years old, (standard); each as lifted to be replaced in the hole and slightly covered, intending to plant them some days hence. Upon taking them up subsequently, I found the rascal had cut all the roots off close to the stem, so that each would readily go into a half bushel measure. Determined, if possible, to save them, I hit upon this expedient: a load of tan-bark was procured, and the trees buried two feet deep, save a portion of the tops; there they lay until spring, when the tan was removed from the branches. The 15th of May I planted them on the north side of a fence (shade), for a recuperative period. New roots had put forth in the tan. They came out fresh; all lived, and have done well.

Three years since a piece of land came into my possession, having at a prominent point a pear wilding, probably fifteen years old. At first I concluded to cut it down. But on reflection—a tree being easier cut down than built up—I determined to make an experiment with it. I had finished grafting some weeks before, and had thrown a small bundle of Bartlett scions in the wood-house. Upon the 12th of May I picked up those dry scions, headed every branch of the tree, excepting one, to within five inches of their base—cleft grafted them, eight in number—one in each branch, the branches being about an inch thick. Six of the scions I covered entirely with dissolved shellac. The other two were left as usual. The six grew finely, while the *two* died out! This season the tree bore some very fine specimens. Now, it may be said this case is irrelevant; but not so. The scions were *mulched*—that is, evaporation was checked so long as needed.

We should not forget the fact, that all our popular fruits are entirely artificial. The normal condition of the plant has become changed. Their tissues have become lax, and their constitution more or less enfeebled. The wilding has strong and vigorous roots, with generally a long tap-root. Their wood is firmer, of closer texture, and possesses a much greater vitality, and hence needs not those aids practice finds necessary to employ, to insure success with our more edible fruits. There *are* some certain varieties of our high-bred fruits, whose peculiar habits enable them to bear much better than others the alternating influence of drowth and moisture—the Heart and Bigarreau cherries, for instance. Their roots penetrate deeply into the soil, while the roots of the Duke and Morello varieties are horizontal and near the surface, and especially need mulching. But of all fruit-trees, none require mulching so positive as the dwarf pear. The quince roots are fibrous, and lie near the surface; a continuous and large draft of properly eliminated sap is demanded by a vigorous growing top, which should it fail only temporally, growth ceases, and a *stunt* is the result, which rarely recovers itself. Tolerable care in planting, with a suitable mulch, will insure the safety of at least eight of every ten; while eight-tenths die or fail to do well without it.

In transplanting trees, stones of all sizes, and bricks, whole or broken—not rejecting bones—I have an especial favor for. They are placed in suitable position among the roots. They are called "*mulchers*," and have, I conceive, a valuable office to perform. They not only drain the soil, but keep it moist and cool at midsummer. They are, in fact, a "mulch" of the second degree. On the 10th of September, ult., I planted an acre of strawberries. The weather was hot and very dry; the soil had been several times plowed in July and August, and was *very* dry. The plants as taken up were carried to the shade of a tree, where they were trimmed, that is, part of the leaves were cut off, and the roots shortened one-half with a pair of scissors. They were then dipped in soft mud, and carried to the planter in a basket, three or four hundred at a time. A German woman planted, while another followed close on with the tan cart, and dropped flat upon the plant about two or three quarts of wet tan. When all was so done, the cultivator was run lightly through, leaving all neat and smooth. Had some novice seen the plat at this time, he would have gazed in wonderment at the conical heaps of tan; rarely any of the leaves were visible. Subsequent rains, however, partially uncovered them, and in about three weeks after I sent the planter with some score of plants to re-plant misses. She brought

full two-thirds of them back, as not required. They have now, November 10th, made new leaves, and are strong for the winter. Pray now, what am I indebted to for these successes, if not to MULCHING?

[The above has been on hand some time, but has lost none of its freshness, and is now in season. Mr. C. writes warmly; but he does not understand the drift of the discussion at the meeting of the Pomological Society as we understood it, which we think was mainly directed against excessive mulching. We have not the proceedings at hand, but will look them up, and recur to the subject again.—ED.]

PLANTING SHADE TREES.

BY P. R.

WHEN the poet Keats was lying on his death-bed in Rome, he requested that the epitaph on his tombstone might be, "Here lies one whose name was writ in water." From his earliest years he was an ardent lover of flowers, and many of his happiest hours had been spent in watching their growth and wonderful unfolding. A few days before he entered the "undiscovered country," he said, "I feel the flowers growing over me." A little headstone marks the spot where his ashes lie, on which are rudely carved, with impatient fingers, his name, age, and the epitaph I have quoted. No careful hand has planted tree, or shrub, or flower, above the spot; but the daisies he loved so well crowd in profusion the little mound above him, and keep tender vigil over the once genial and palpitating heart. But, although the dust of the desponding poet sleeps not by the side of his illustrious *confrères* in Westminster, his name is not "writ in water," but in the hearts of thousands from which come answering echoes to the sweet, sad strains he sung. His love for flowers found frequent expression in lines of liquid melody.

Few are the men who would not, if they could, leave some indication behind them of a passage over life's ocean, when their voyage is overpast; but with most the waves close up behind, leaving no track nor trace, no vestige of foam or ripple, to tell succeeding *voyageurs* that a life has passed that way before them. A few—men of genius, or unquestionable ability—succeed in stamping their impress on all coming time by literary labor, or works of art, or political wisdom, or military power; but a vast majority make their exit, leaving at best but a faint and short-lived shadow behind—a fine dwelling, perhaps, or more likely an epitaph—"Sacred to the memory of —— ——, a kind father, a good citizen," etc., etc., coldly cut on some marble slab by surviving relatives. Plenty of such "names to live" may be found in country churchyards and our more imposing city cemeteries.

But no one, especially in the country, need be forgotten. A man may perpetuate his memory, and establish himself impregnably in the hearts of thousands yet unborn, *by planting shade trees.* There is no danger of planting too many. The streets of every city, town, and village in the land should be lined with these green and grateful sentinels, so that, in the dim future, the traveller, weary and foot-sore, toiling along his dusty way beneath a broiling sun, shall look up and say, "Bless the man, whoever he was, who planted these beautiful trees! May he be resting to-day beneath the green foliage of those on the banks of the River of Life!"

Thoughts like these were passing through my mind not long since, while

THE OLD STICKNEY RESIDENCE, CONCORD, N. H.

riding through some of the smaller towns and villages of New Hampshire, towards its capital. Many of those village streets are handsomely supplied with thrifty shade trees—sometimes elm and sometimes maple. Although much more attention is paid to this cheap but beautiful ornamentation of the public thoroughfares now than formerly, still the mass of the people are not yet awake. Why is this? Is it because man's innate selfishness argues, "I shall not live to get the good of them, and so what is the use of putting one's self to the trouble?" Shame on such short-sightedness—such folly! Will men never learn to care for others, and by so doing care for themselves? Who of us does not expect to be here ten years hence? Yet ten years will give a fine growth to an elm or a maple planted in 1860. And besides, what should we have had valuable to-day had our fathers and grandfathers done as we are doing? They were willing to sacrifice themselves for the *future* and their children! Let indolence and selfishness no longer triumph; let us reform, and let us begin *now*.

As I approached the town—passing, meanwhile, the granite obelisk that marks the spot where five of her ancient citizens were scalped by the red men, and others taken captive—I listened, in imagination, for the whoop of the painted savage; but only sights and sounds of civilization met me. The primeval forests were gone, and the curling smoke from the red hunter's wigwam had long since disappeared above the tree-tops. Instead, cultivated fields, now covered with snow, and white men's dwellings, met my view. The thermometer stood at zero; the clouds were feebly shaking the snow from their shaggy coats, and so I hurried on. When I reached the little eminence that overlooks, and yet is a part of, this gem of New England towns, I stopped, a brief space, to look on the city below. For two miles and more in length, between my stand-point and the broad meadows of the Merrimack, the beautiful city lay stretched before me—beautiful in its long and wide streets of fine residences—beautiful in its quiet, and apparent peacefulness, scarcely permitting a thought of strife, and contention, and jostle, among the dwellers below—and especially beautiful, even at this inclement season, in its myriad shade trees, whose bare arms were held aloft, high above the house-tops, toward the great Source of revivifying power. One has a touch of human feeling for trees in winter, with their limbs all unprotected, especially in the climate of northern New England, and would fain wrap around them some warm covering, and stanch their flowing tears.

> "Yon naked trees, whose shadie leaves are lost,
> Wherein the birds were wont to build their bowre,
> And now are clothd with mosse and hoarie frost
> In steede of blosomes, wherewith your buds did flowre;
> I see your teares that from your boughes do raine,
> Whose drops in drerie ysicles remaine."

So sang old Edmund Spenser three hundred years ago; and if the trees rained tears then, why not rain them now?

But often have I stood on this same spot, and surveyed the scene before me, when

> "Iolly Iune, arrayd all in greene leaves,"

had buried the city almost as deep in its wealth of foliage, as Herculaneum and Pompeii were in the lava and ashes of Vesuvius. There are a few towns in New England where little remains to be desired in the matter of shade trees—and the capital of New Hampshire is one of them. It can boast its miles on miles of trees; indeed, from any point overlooking the

town, it presents the aspect of a "grand old woods," with here and there a public building, a church spire, or a spacious dwelling peering through the green. The trees are principally maple and elm. And here I must be allowed to digress, and say, that while the maple is a remarkably fine shade tree, and of rapid growth, in my humble opinion it will not bear comparison with the elm, nor can any other of our forest trees. Among them all, the oak, perhaps, is monarch. He has an imperious will, a kingly bearing, and he scowls defiance at his foes. He was born to rule, and he has "ruled in the greenwood long;" there let him remain, our boast, our pride, and the subject of our song. But the elm—the noble, dignified, social, parental, cheerful, good-tempered elm—let him come almost to our very fireside, our door; throw over us his protecting arms, shade us from the noontide sun, shelter our birds, and, in concert with them, sing us our morning and our evening songs. Heaven bless the elm, and bring it to the haunts of men in a profusion that shall know no end!

A large proportion of the shade trees of Concord are elm—trees planted a hundred years ago. The accompanying engraving represents a dwelling of the olden time, the frame of which is one of the most venerable in the city. It was originally built as a kind of fort in troublous Indian times, and is of massive oak. Many are the changes it has undergone since then; but while decay has long been gnawing at its vitals, and generation after generation has come and gone beneath its hospitable roof, the old veterans of the past, that have smiled and wept alternately in sympathy with those beneath them for a century of years, still live to mourn the demise of the hand that planted them; and future generations will admire and love them. The men who planted those trees and multitudes like them there, though dead, "still live." Their names were not "writ in water." The benedictions of grateful thousands who walk those streets, follow those public-spirited, noble, unselfish benefactors, who planted for posterity.

Then plant shade trees—plant them along every street in city, town, and village, and they will live when you are gone. Children—your own, perhaps others'—what matter?—will play beneath their swinging branches; year after year the birds will build their nests among the leaves, and whisper to each other their little loves; many a weary wanderer will weave a web of happy thoughts as he looks up to their intertwining boughs, and, from their refreshing shade, gather fresh courage for a continuance of his journey to that "better country," where there is "no burning heat by day;" and all this when "Sacred to the memory of ——" shall be effaced by the rude hand of Time from the prostrate and broken stone that once marked your burial-place.

TOWNSEND OR SEAGER APPLE.

(See Frontispiece.)

BY CHARLES DAVIS, JR.

HEREWITH I send you a drawing of an apple known in this neighborhood as the Seager, but Downing describes one, a native of Pennsylvania, which very nearly agrees with the characteristics of this fruit, under the name of Townsend; the latter will, therefore, probably prove to be the proper name. However that may be, it is worthy of notice and more extended cultivation.

The inclosed sketch of its history is furnished by Charles Sitgreaves, Esq.,

who is well acquainted with the fruit, and he considers it "the best early apple grown."

Tree vigorous, and produces good crops. Fruit large, roundish-oblate. Skin smooth, waxen, greenish-yellow, much shaded with brownish-red. Stalk slender, about an inch long, set in a smooth, deep cavity. Calyx small, closed, set in a moderately deep basin. Flesh white, tender, and juicy, with a rich and pleasant flavor. Maturity 10th of August to beginning of September.

The following is Mr. Sitgreave's sketch of its history:

The original tree grew on a tract of land owned by Indians near Lumberville, in Bucks County, Pennsylvania, and was of enormous size anterior to the Revolutionary war, when the tract was sold by the Indians, with a reservation "that the fruit of this tree should be free to all, as it had been to them and to their fathers."

The trees at Philipsburgh, New Jersey, derived from this grandfather stock, were three times larger than the average size of apple-trees, and died of old age some years since.

IONA ON THE HUDSON.

BY SOLON ROBINSON.

About three miles above Peekskill, and prominent among the jutting promontories that slope up from the water along the ten miles to West Point, stands one, if not more prominent, more noted than any of its green-wooded fellows, from the fact, that from some fancied resemblance, in rock or wooded outline, to the prominent features of that old saint's face, it was named by the early navigators of this rock-bound river, "St. Anthony's Nose." By that name the navigators of the Hudson still know it; and transient passengers, by water, who have read its early Knickerbocker history, still ask to have it pointed out; but the passengers along the rails, although anxious to catch a view of so prominent a historical object, are denied the opportunity; for the Hudson River Railroad company have bored through the very gristle of his saintship's nose, and at the very time passengers might desire to look upon its outlines, they are shut up with darkness in the rocky, tunnelled chambers through the nostrils.

Directly under the shadow of St. Anthony's Nose, over against the opposite shore, lies an island, long known by a corruption of the former owner's name, but now, just beginning to be recognized by its new appellation of Iona. This name was given to it by the present proprietor, or rather by his father-in-law, Mr. Bevridge, in memory of a Scottish island of that name, the seat of active missionary labors to the neglected inhabitants of the adjoining mountains. And this name was also applied, because it was his intention, besides making this a health-restoring residence, to try to extend from it some religious and educational advantages to a very isolated mountain population, in the upper corner of Rockland County, which is as destitute of such advantages as ever were the Highlanders in the vicinity of the Scottish Iona.

"What is this Iona, and what do all these singular buildings mean?" That question we intend to answer, and with it not only gratify curiosity,

but at the same time incidentally give the reader some as valuable information as we have ever penned; for we shall tell them how to produce two or three kinds of the richest fruits grown in this country, upon as unforbidding a soil as any of them happen to possess. And we shall tell them, too, of the vastest propagating houses ever erected in this or any other country, for the sole purpose of growing grape-vine plants under glass, as a regular nursery business. We think we shall astonish some old hands at the business, as well as surprise that class of people who have no conception of the power of man, working with science—that is, with reason and common sense, aided by experience—to multiply valuable plants to meet a sudden, pressing demand.

But first, of Iona. It is an island of 300 acres, about two and a half miles from Peekskill, about half of which, next the mainland, is a partially salt marsh; the rest is rocky. On the side next the mainland is a narrow creek dividing it from the shore. From this point is a very circuitous mountain path, scarcely ever travelled, but over which a team may be driven out into a civilized region. The way of approach, however, for all visitors, is by row-boat.

The upland of the island is, more than two-thirds of it, a rocky woodland, thinly covered with cedars of that peculiar form often noticed in this region, and never seen, so far as we can learn, in any other. They are not only singular, but singularly beautiful, the limbs of both large and small trees forming perfect symmetrical cones, sometimes not over four or five feet in diameter, in trees forty feet in height.

The arable portion of the island consists of about forty acres, elevated, at its highest point, perhaps forty feet above the water. The soil is composed principally of drift, which embraces in its composition almost as great a proportion of pebbles as any old field gravelly knoll in the State.

Ten years ago it certainly was a very unpromising spot for a fine vineyard and extensive pear orchard. It was owned by a man whose greatest wealth, besides the land, consisted in eighteen sons and daughters; but their father did not know how to apply these hands to develop the richness of his lands, and his chief profit came from the crop of natural marsh hay. This and the scanty crops of the poor old fields were insufficient to support the family, and they eked out a living by fishing. We shall see presently what the present crop is; and how many the island now supports, without either the leisure or need for fishing.

This island was purchased about ten years ago, for $10.000, by Doctor C. W. Grant and Mr. Bevridge, his father-in-law, of Newburgh, with the intention of devoting it to the culture of grapes and pears for the New York market. Mr. Bevridge at once took possession, and the Doctor devoted to it all the time he could spare from his professional practice; but it is only about six years since he took hold in earnest to see what could be made of this naturally hard-featured spot.

Although the soil would appear to a person who lived on a rich prairie, a coarse gravelly mass, it is really in a high state of fertility, and perfect disintegration, two or three feet deep. But a small portion needed draining; the deep trenching was sufficient; but all needed high manuring, before it could be expected to grow such vines as only will produce fine grapes, or such trees as can alone be depended upon for high-priced pears.

At first manurial substances of various kinds were imported, but enough to suit the Doctor's notions could not be had that way.

The marshy part of the island, upon examination, was found to be composed of silt, much of which had been deposited since the hill-sides of the upper part of the river have been annually washed of their richness, loosened by cultivation, upon which a great mass of vegetable growth has accumulated. Here, then, was the great reservoir out of which to draw fertility for the upland; a reservoir so great that it is inexhaustible by any ordinary amount of human labor. It is better than a mine of iron ore, for which a near-by pile of rocks has long held a high value. Yet rich as this mine is, "surface diggings," too, at that, the former owner, in all the time that he had lived here while his eighteen children were growing up around him, had never discovered its great value, though he sadly needed something to make his gravelly upland more productive.

It remained for the present owner to open this mine, and most effectually he has done it. From the closest figuring of the amount he has taken year by year, and the quantity applied per acre, we conclude that about *ten thousand cords* of muck have been taken since the purchase of the island ten years ago, and much the largest portion within the six years that Doctor Grant has been actively operating.

As this muck is not in good condition to use as it comes from the marsh, the following plan has been adopted for cheaply making a most valuable compost. The hay of the marsh is carefully saved by stacking it upon platforms, on the soft part, until the frost makes a bridge, and from the part where a team can travel it is brought at once to the barn and stacked. A large portion of that cut from the driest part is excellent hay, from a jointed grass, and all but the very coarsest is greedily eaten by cattle. But a stock sufficient for its consumption cannot be kept on the island, but it can be obtained from the mountains in any quantity, to board five months at $1 to $1 50 a month, and so some 60 or 70 head of young cattle are taken in every winter for the purpose, not so much for disposing of the hay, as for obtaining a cheap solvent for the muck, which their droppings furnish.

From the driest portion of the marsh, a sufficient portion of muck is dug in summer to spread a foot deep or more over the extensive barn-yard, and this being covered with a thick coat of coarse grass is ready for the winter. If the tramping of the cattle work up mud, it is covered up with more waste hay, so that the animals have a dry bed all the time, and here the portion that are not stabled, spend the winter, water being provided in the yard.

Muck is also spread in all the stables, and absorbs all liquids, and during the winter a great mass of it is dug and hauled from the marsh to the yards and stables, or in piles for future use. In the spring the contents of the yard, some two or three feet deep, are not at once removed, but suffered to remain till a convenient time during the summer, and until so much decayed as to make the work of handling easier, and then this great mass of rich manure is overhauled and carried to convenient spots, and stacked up for future application to the land.

Whoever saw this place in the occupancy of its former owner, saw that the surface had been slightly scratched over, and what was called soil was not in a condition to produce any thing but the scantiest crops, and of fruits it had next to none. Below the soil there was a compact mass of gravelly loam, sufficiently clayey to be productive if allowed a chance, and suffi-

ciently loose when broken up, to require very little under-draining. Only in one spot where the water-shed brings the course of the natural drainage down to a rock dyke, and thus to the surface, has tile draining been found particularly advantageous.

Like hundreds of other farms, in all these hard-featured granitic counties of Southern New York, this had long been called "worn out;" a term as inappropriate when applied to a farm as it would be to the walls of the Palisades. This is evident to whoever sees it now, for he will see a pulverulent soil of two to three feet deep; the sand, gravel, and clay, homogeneous with an abundance of vegetable matters, making a dark, friable, highly productive, and easily worked soil, requiring very little annual outlay of labor or fertilization to keep it in the most perfect working order. It is now in a condition to give back a profitable return upon the original cost, and all the expense of improvement, and the labor of cultivation.

And this has mainly been effected by muck—nothing but muck, just like the inexhaustible supply upon half the farms in this part of the State. It is true, that at the commencement of operations, sundry sloop loads of animal manure, salt, lye, lime, plaster, and the waste of manufactures of various things, were brought to the island, but these were all adjuncts of the muck, to aid in its decomposition, or to be used as immediate fertilizers while that was preparing, as it is not considered profitable to apply it in its raw state; but after it has lain six or eight months in the cattle yard, and has then been piled and lain some months longer, the whole mass is considered more valuable for manure than it would be if composed entirely of cattle droppings. In fact, the addition of any animal substance to muck, has an effect not unlike the addition of yeast to flour, and the fermentation and decomposition is hastened by such an addition in about the same proportion as the fermentation of the moistened flour by the yeast. And as bread is greatly improved by the process of kneading, so is the muck by a similar process: the more it is stirred, the better it becomes, and its lasting effects in the soil are remarkable. Its effects in the soil of this once almost sterile island, are not only remarkable, but sufficient to satisfy the most sceptical farmer that its use would be profitable.

As soon as possible after the purchase of the island, ten acres of ground were prepared for a pear orchard, though not as well prepared as the Doctor would now prepare before planting, and the consequence has been, that the labor of deep trenching and thoroughly mixing the soil and compost two to three feet deep, has been done in a great measure since the trees were planted, at a great additional cost of labor.

"No pear orchard should be planted," says Doctor Grant, "until the land is trenched two to three feet deep, and thoroughly worked up and mixed with compost; and if inclined to be wet, perfectly tile-drained; and then there is not the least difficulty in producing great crops of the richest kinds of pears grown in this country."

In proof of this we witnessed as fine a display of fruit as we ever saw upon so young an orchard. The trees not only hung full—too full for any but land in the very best condition—but the fruit was large and all of excellent appearance, and such as was then in condition for eating, we can attest was excellent in flavor. In short, its richness showed the high state of cultivation of the trees. All the fruits of muck and deep tillage.

Reader, have you ever thought that you can not produce rich fruit upon

poor soil? That you need "fat pasture" to make fat pears, just as much as you need "fat pasture to make fat calves?"

Doctor Grant has now in bearing upwards of a hundred kinds of pears, nearly all of which he has proved worthy of cultivation, either as standards or dwarf, and some of them as both.

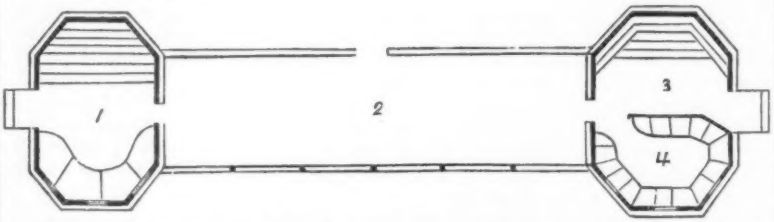
"But, Doctor," we said to him, after spending some hours in the pear orchard, "men in ordinary circumstances can not, or at least will not, plant trees of a hundred sorts. A farmer might grow five; a retired citizen, with a taste for horticulture, would not exceed twenty; and if one could get an assortment of summer, autumn, and winter, by planting trees of twenty sorts, the probability is that ten would grow pears where one would if he had to plant a hundred. Now let us make up such a list, as we walk about among them, with a few notes upon the character of each, from which an amateur can judge how each is suited to his particular wants. Such a list, that can be depended upon better than some nurseryman's recommendation, will have a tendency to increase the cultivation of this valuable fruit."

[The Doctor and Mr. Robinson continued their walk, and made out the proposed list of pears, which we have already given to our readers. One more article from Mr. R. will "finish up," we suppose, Iona Island. We would direct special attention to Dr. Grant's mode of using muck. A bed of this material is as valuable as a mine to the man who may be so fortunate as to possess it.—Ed.]

AN AVIARY.

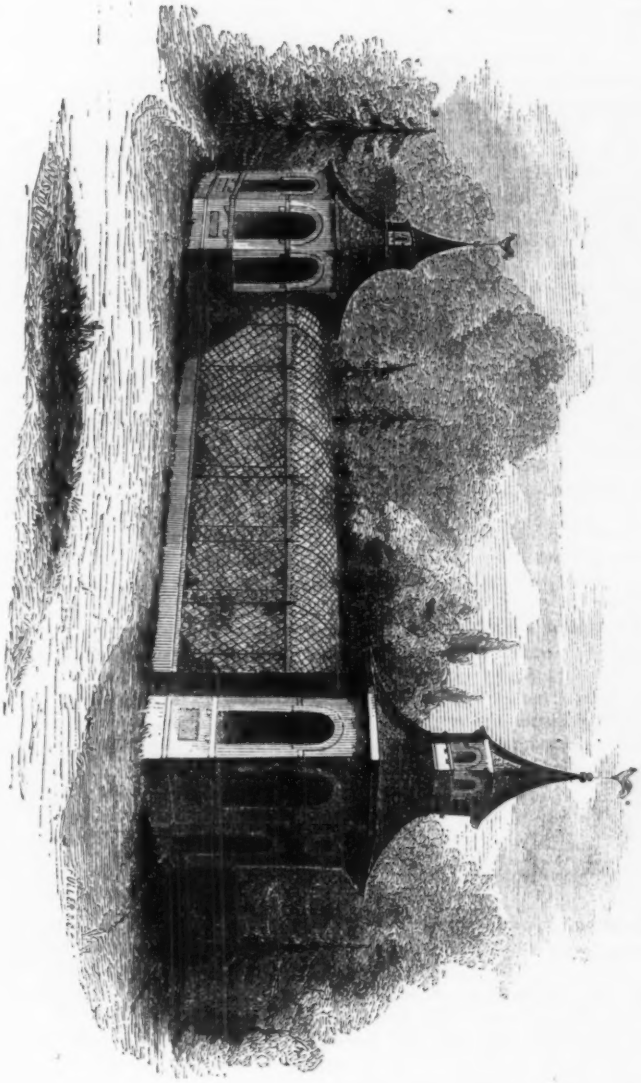
BY WILLIAM H. WILLCOX.

The Aviary, of which the accompanying drawings are illustrative, is now erecting on the grounds of John Anderson, Esq., at Tarrytown, N. Y. It is situated on a finely rounded and wooded knoll, in full view from the house site, and borders on the "Drive." Being well sheltered on the north by a grove of healthy and luxuriant pines, interspersed with deciduous trees, and well drained and cleared, a more favorable situation could not possibly have been selected.



The structure consists of two towers, connected by a long range or "Run" of wire-work, this "Run" being 45 feet long, 12 feet wide, and 12 feet high. The towers are octagonal, 10 by 17 feet inside dimensions, one (marked 1 on plan) arranged for the reception of feed bins, and one for nesting, (3,) and both accommodated to roosts, (4.)

In the centre of each tower, from the ceiling upwards, are placed venti-



AVIARY OF JOHN ANDERSON ESQ., TARRYTOWN, N.Y.

lating shafts, which, while extracting the vitiated air and keeping the rooms sweet, yet are so arranged as not to permit the communication of one family with another, if desired. The space inclosed by the lower roof is devoted to fancy pigeons, and other birds, of which a large number of rare breeds must be accommodated; from these, openings lead into the "Run." The octagon houses over these chambers, and with no inner means of communication, are intended for the lodgment of the more common birds.

The "Run" is inclosed all over with diamond wire-work of about one inch mesh, and small wire; it is secured in strong frames to the upright bars and rafters, which are also of iron, and all galvanized. It makes a neat and airy inclosure, will not permit the birds strolling out, and precludes the possibility of destructive animals entering from without; ample room, with abundance of light and air, is thus afforded. It is being erected by the well-known house of Hutchinson & Wickersham of this city, who manufacture a great and pleasing variety of horticultural articles and structures in iron. The same firm are now making a Duck inclosure for Mr. Anderson, the plans of which it will afford me pleasure to place before your numerous readers in a future number.

Mr. Anderson, with a fine feeling and taste, has skilfully managed his "place," and out of scant thirty acres, will soon produce a perfect Elysium, an achievement rare, even in ten times the size. A short year ago, and the site was a rough forest growth, with no associations save those which the genius of Irving hallowed; but the present proprietor has seized upon its charms, and with judgment, cautiously and carefully improved and heightened its natural developments. The Drive, particularly, is well managed, and conducted through the most pleasing points of view; and although the openings are not numerous, this is rather a fault on the right side, since Mr. A. has only just commenced operations, and to hazard destruction, without calm reflection, is to engender ultimate regret. In another number I may be tempted to describe this fine estate.

[Mr. Willcox's modesty probably prevented him from saying that the above design is by himself, and we therefore give him credit for it. We have seen a number of architectural designs by him, evincing good judgment and taste, and we shall be glad to hear from him again. We have removed his post-office address from his signature, and append it here. Box 365, N. Y. post-office.—Ed.]

ORCHARD HOUSES.

BY H. W. SARGENT, "WODENETHE," FISHKILL LANDING, N. Y.

Leafring, in your April issue, asks for some information about Orchard Houses. As I have had some experience in this new mode of culture the past three or four years, I shall take the liberty to answer his question.

Leafring should not have planted his trees in November, or rather the trees should not have been put into the house at this time, and I should very much question the advantage of getting them at all before the spring, since a tree taken from the ground in November, and put into a pot, would hardly get sufficient root-hold to be secure enough to be kept back in a cold or pit house during the winter.

In the first place, the trees, vines, &c., should be planted in pots (13 by 13,) or one size less, *not* boxes. Early in April, if not in good shape, they should be cut back to three or four buds, and then brought into the house. Presuming that Leafring understands their subsequent summer treatment, the proper amount of watering, syringing, pinching, &c., and above all, the great care necessary against the attacks of red spider, with a careful ripening off the wood in the autumn, I proceed at once to their winter treatment, where I think he has made two principal errors.

In our extremely cold and disagreeable winter, we wish our wood to be *entirely* ripened off. Leafring, instead of giving his trees "a good soaking," as is the custom in the entirely different English climate, should have watered his plants, after October, barely enough to keep them alive, and ripen them as much as possible. In fact, if out doors, they should be moved under cover at the sign of any storm.

In the second place, he could not possibly have done a worse thing than to put them into his house at the beginning of winter, and to leave them there, subjected to the tremendous alternations of 60 degrees by day, and perhaps zero, or a little above it, at night. He is very much mistaken, or I certainly am, if he thinks his thermometer does not get *below* 40°.

I think there were nights last winter, and every winter, when the mercury in any glass-house without fire, will get down nearly as low as it does outside, in the same way as a powerful January or February sun will carry it up to 70° or 80° during the bright hours.

All orchard-house trees in pots, in this country, should unquestionably be removed at the approach of winter, to some cellar or pit, where they get *very* little or no frost; or, if necessary to be kept in the orchard-house, they should (in their pots) be heeled-in pretty deeply, and the trees above ground shielded as much as possible from sun by mats or hurdles platted in straw, or even boards ; but no sun should be allowed to come to the trees, and no, or little frost to the root, until the time to begin to force, if fire heat is used, or until it is safe to commence without fire, say 20th of April to the 1st of May.

In either case, they should be very carefully taken up, so as not to injure the buds ; the trees and pots washed, dressed with a rich mulching, and syringed, and the temperature not permitted to fall below 50° by night, with plenty of air by day.

It is almost impossible, in our long, dry summers and intense suns, to keep the trees from red spider; therefore I have found it best to move all my pots out about the first of June, sink them in the ground, and mulch the surface. In this way, there being less evaporation, the plants require less water at the roots, though constant syringing in very bright, dry weather.

By adopting this process, particularly by removing all the plants into a cellar during the winter, and keeping them very dry, and as early in the spring as you choose to force, (I generally begin 1st March,) moving them back again until 1st June, I have succeeded in getting the finest possible fruit, and in the greatest abundance, of every variety—Apples, Grapes, Cherries, Plums, Nectarines, Apricots, Peaches, Figs, etc.; in short, with a good cellar or pit from November to March or April, and an orchard-house from April to June, with an outside bed or border from June to November, one can raise any variety of the above-mentioned fruits, in perfection. In fact, in our climate in America, I believe a light, airy cellar, free from much frost, is alone necessary in order to protect the plants from November to

April, when the pots could be brought out and sunk in the ground. This method of cultivation, however, would not advance the trees much, if any, over those planted in the ground outside, but would have the advantage only of winter protection under cover. The fruit, however, would be as fine as if started in an orchard house.

The great and (if one has a cellar or pit for the trees in winter) the only use of an orchard house in this country is, from my experience, the advantage of introducing fire heat during March, so as to give the plants one month's gain over outsiders. This advantage allows the fruit to become sufficiently large to resist the attacks of the curculio, when the weather is warm enough to require the ventilators opened, or when the plants themselves finally are moved out.

I have, at this moment, Peaches covered with fruit, which less than one year ago were planted in a 13-inch pot, and cut back to a naked stem (stick) *four inches only long.*

[Mr. Sargent has probably had more experience with the "Orchard House" than any other person in the country, and Leafring, in common with others, will thank him for the valuable information contained in his article. Mr. Sargent's position, that the only use of an orchard house in this country is to forward the fruit, is no doubt the correct one. We grew fruit-trees in pots many years ago, and have elsewhere given our views on tha subject. Leafring, in addition to the error of placing the trees in large tubs, made another, and a serious one, in the purchase of trees of large size, as we have had occasion to say to Leafring personally, from whom we had the pleasure of a call; and we may just as well say here, (and we blushed not a little when we discovered our mistake,) that Leafring is not a man, but a real woman, whose name would be recognized by thousands should we mention it; but that we shall not do at present. The joke was too good to be lost, and so we have preferred to let Mr. S. also call her "him."—Ed.]

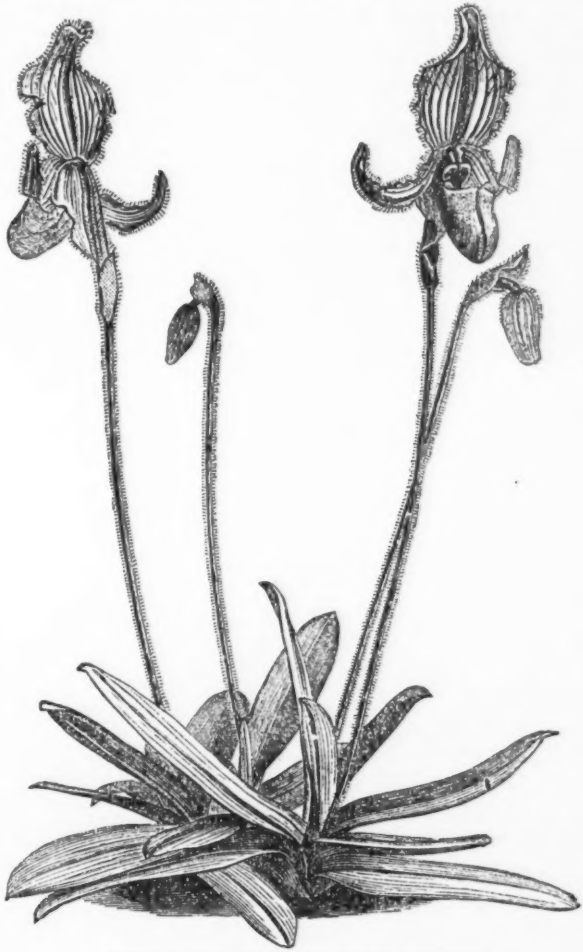
FAIRIE'S VENUS' SLIPPER, (CYPRIPEDIUM FAIRIEANUM.)

(From the *Revue Horticole.*)

The tropical orchids have for a long time been objects of intelligent culture, and amateurs have not feared to make considerable sacrifices for the acquisition of these choice plants. It is desirable, also, that we should have introduced into our gardens some of the more remarkable kinds of native growth. Why, therefore, have we not hitherto had attempts in this direction with our indigenous species? Those persons who are familiar with the *Orchis fusca, militaris, galeata,* and *ustulata;* the *Anacamptis pyramidalis,* and the *Ophrys,* the charming flowers of which imitate the forms of different insects, will agree with us that these species would be a treasure for the ornamentation of our borders.

This omission of the indigenous orchids arises principally among us, from the fear so generally felt that these plants do not without difficulty succeed under cultivation. But if we are to credit the statements of persons who have experimented upon them for a long time, this fear is perhaps exaggerated. Not only do many of the handsomest kinds succeed without much trouble, but in reference to others an intelligent observation of their consti-

tution and of the *surroundings* which they require, can furnish valuable information as to the course to follow in their cultivation. As an example of this, we will state a curious fact observed several years since by M. Aug. Rivière, head gardener of the Luxembourg, who has since directed so skil-



PLANT OF CYPRIPEDIUM FAIRIEANUM, HALF THE NATURAL SIZE.

fully, in connection with his venerable uncle, M. L'Homme, the cultivation of the garden of the Faculty of Medicine, in which the collection of Tropical Orchids is one of the most complete now existing.

M. Rivière, with indefatigable perseverance, has also tried the culture of indigenous orchids. For a long time he was baffled by several species, notwithstanding all the care he bestowed upon them. Most of the plants died immediately; hardly one passed the second year of cultivation. M. Rivière then conceived the idea, that perhaps their growth or existence required that they should be in company with other plants. The experiments made by him for the purpose of determining this question had not at first any success. The grasses, among others, which he supposed particularly favorable to the orchids, from seeing them in nearly every locality where the latter were growing, were found to overpower them by the rapid development of their roots.

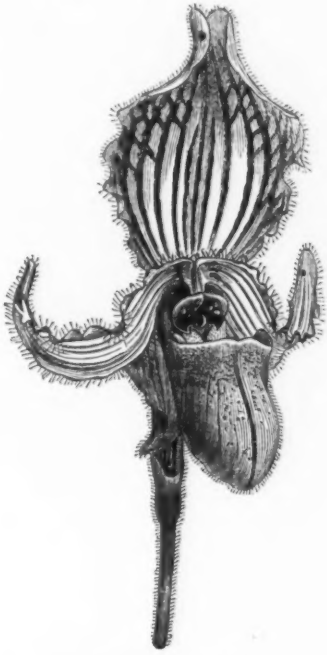
One day he observed on a tuft of *Iris florentina* which had been thrown aside a small orchid germinating; he separated carefully this portion of the tuft, placed it in a pot, and, to his great astonishment, saw it develop a vigorous plant of *Spiranthes autumnalis*. A happy chance had sown some seeds of this plant among the Iris. The *Spiranthes* was just one of the plants which had up to this time most obstinately refused to adapt itself to cultivation: the problem was therefore solved. He had at last found a companion acceptable to the capricious orchid. Subsequently, he replaced the *Iris florentina* by the *Iris nana*, more in conformity with the orchids, on account of its smaller growth, and from this time his *Spiranthes*, far from perishing, took a development and a condition of health and vigor, superior to any thing exhibited by them in their natural places of growth. The plants of these experiments are still flourishing in the garden of L'Ecole de Médecine, after eight years' cultivation, while experiments in cultivating this species by itself in heath mould, sand, and virgin earth, have constantly failed. M. Rivière informs us that he has also associated this *Iris nana* with several other refractory species, and that they find themselves quite at home and thriving in this society.

This interesting fact proves in an evident manner how much an intelligent observation of nature is useful in cultivation; it teaches us, at the same time, that obstacles supposed to be insurmountable, are sometimes overcome in a very simple manner. If then, as is our conviction, we should never forget to draw the ornaments of our gardens from the treasures of our indigenous flora, we believe we are acting in the interests of horticulture in recommending warmly the field orchids to those of our readers who admire not only rarity, but above all beauty of vegetation.

After this long digression, inspired by our constant wish to place in view the value of our indigenous flora, let us examine the charming exotic of which we now give a representation, drawn from a plant that MM. Thibault and Ketelcer, with their habitual complaisance, have allowed us to use for the purpose at their place. The *Cypripedium Fairieanum* (see figure), originating in the East Indies, probably in Assam, was introduced into England nearly two years ago. The species was established by Mr. Lindley, and was named *Fairieanum*, in honor of Mr. Fairie, of Liverpool. It has some similarity to the *Cypripedium insigne*, of which, however, the flowers are smaller, and it approaches more nearly the *Cypripedium superbiens* of Riechenbach.

It is an acaulescent plant, of which the distichous leaves are close to the soil, rather broad, pointed at the summit, and carinate at their base. The scapes, each bearing one flower, have a length nearly double that of the

leaves; they are upright, cylindrical, green, and hairy. The large and handsome flowers issue from a bract, ovate-lanceolate, pointed and hairy like the scape. This bract envelops the inferior portion of the ovary, which is elongated, deep purple, and covered with glandulous hairs. The perianth is much spread. The large superior sepal is cordiform, greenish white, veined with stripes of dark green and deep purple; its summit is obtuse or somewhat crenated, the edges are undulated. The two inferior sepals adhere in one, of an oval obtuse form, showing also at the base, green and purple stripes. The two lateral sepals, curved in a singular manner like the horns of a buffalo, are undulated on the edges, white, and ornamented with purple



FLOWER—NATURAL SIZE.

and green stripes. The third sepal, or labellum, is very large, of a brownish green, reticulated with purple. The sterile stamen is orbicular, crescent-shaped, green, purple, and white, hairy, and has in the middle, between the horns of the crescent, a downy extension.

The *Cypripedium Fairieanum* flowers with Messrs. Thibault and Keteleer in September. The treatment of it is precisely analogous to that of the other species of the same genus.

THE CAULIFLOWER.

BY S. H. FRY, NEW BRIGHTON, STATEN ISLAND.

This much-esteemed vegetable is considered by many rather difficult to obtain, and also somewhat expensive, but, with a little judgment and forethought, Cauliflowers can be successfully grown, and with but a trifling expense. Where Cauliflowers are needed early in the spring, there must be the conveniences for growing them; that is, frames with two sashes, 9 or 12 feet long and 5 or 6 feet wide. You can have three successive crops in the spring, by growing the third in the open ground, trenched or spaded deep, not sparing the manure; for, remember, you can not manure too heavily for Cauliflowers. The seed for these crops must be sown in September, in the open ground, and the plants transplanted into a frame for the winter. Sow the seed thin, for short stout plants are much preferred, and plant them two or three inches apart each way; protect them from severe frosts, giving air always when the weather will permit; for, if kept too close, they will mildew and grow weak. In the month of February, prepare a hotbed for the first crop. There are two ways: one, by putting the manure into a hole or pit the size of the frame; the other, by building a heap on the level ground one foot or 18 inches larger than the frame, each way, so as to bank the manure up outside the frame. Generally this method is adopted where there is plenty of fresh stable manure at command. In making a hotbed, it is not altogether throwing up a heap of manure and putting a frame on it, but it requires to be thoroughly shaken out and well packed. When the bed becomes heated, cover the manure inside of the frame with 6 or 8 inches of turfy loam, allowing the first 6 or 8 days of burning heat to escape. By this time the bed will be sufficiently cooled down to receive the plants. Plant 6 or 8 in each light, at equal distances, giving air day and night at the top of the frame, for the first few days after, moderating it according to the weather. You can also obtain a crop of Lettuce or Radishes between the Cauliflowers, for they will be fit for use before the Cauliflowers are large enough to occupy the whole frame. After the small crop is taken out, fill in between the Cauliflowers with short manure, say 2 or 3 inches, and raise the frame by putting bricks or blocks of wood under each corner. They will now require plenty of water and to be closed early in the afternoon. When they commence to show flower, crack two or three leaves down over them, to keep the sun from them. I will describe the method I adopt to produce a second crop of spring Cauliflower. The most part of this is done in the fall; when preparing the frames for winter use, I choose a three- or four-light frame, and fill to within six inches of the glass with good rotten manure, and a covering of good soil; plant that full of Lettuce, which can be cut during the winter. About the middle of March, the Lettuce will be all gone; fork the bed over lightly, and plant out the Cauliflowers. You can also have another crop of Lettuce between them. When they get up to the glass, raise the frame, and fill in with short manure. Generally speaking, this crop does well, and produces fine flowers.

EDITOR'S TABLE.

To Contributors and others.

Communications, Letters, Catalogues, Periodicals, &c., intended for the perusal of the Editor, and packages by Express, should be directed to the care of C. M. Saxton, 25 Park Row, New York. Exchanges should be addressed to "THE HORTICULTURIST."

THE spring has been an exceedingly untoward one. Many sections of country have suffered from long-continued drought, and all more or less from cold and frost. We gather from our correspondence that the Peach crop will be a small one; in many places it has been entirely destroyed. The prospect for Apples does not, on the whole, seem to be very promising; but of Pears we are more hopeful. Let us be thankful for what we have.—In our notice of Mr. Bright's book, we stated that the single cane system was entirely new to us; yet at the time we were impressed with the idea that we had somewhere seen something on the subject; but being ill, and away from our books, we gave Mr. Bright the benefit of the doubt. We have since given some attention to the subject, and find that Mr. Saunders, on p. 422 of the HORTICULTURIST for 1859, recommends the single stem system, or, in other words, close planting, and cutting down the alternate vines each year. In this, and all other matters, we simply wish to give credit where credit is due. We also have an impression that we have seen something else on this subject, and we think in Mr. Meehan's Gardener's Monthly; and we shall find it, of course, if we are right. It may be that Mr. Bright wrote on the subject in the Monthly.

THE SEVENTEEN YEAR LOCUST.—As predicted, these locusts are now beginning to make their appearance in various parts of the country. Recently, in New Jersey, we saw numbers of them dug up. They are about six inches from the surface, but die on being exposed to the sun, owing to their being still in an immature stage of transformation. Chickens seem to be very fond of them, devouring them with avidity. Their progress and habits ought to be closely studied.

BLACK HAMBURGH GRAPES.—We are indebted to Charles Butler, Esq., of Hart's Corners, for some fine Black Hamburgh Grapes. Bunch and berry of good size, finely ripened, and covered with a beautiful bloom. Mr. Ellis, his gardener, is one of the best growers we have.

We are indebted to Mr. C. N. Bement, of Poughkeepsie, for three samples of native wine, labelled Catawba, Isabella, and Claret, which he assures us are entirely free from adulteration, and we do not doubt it. They are fair samples of American wine, the best being, in our opinion, the Claret, and a good substitute for that wine. We are fast becoming a wine-making people, and we hope our wine manufacturers will avoid the villainous adulterations now so common with imported wines. If all are conscientious men like Mr. Bement and others, we shall have nothing to fear.

Some time since we received the circular of some association for improving villages by planting trees, or something of that kind. It "went" from our table with some other matters, but we should be glad to have another copy, since the subject impressed us very favorably, and we intended to lay it before our readers.

NANSEMOND SWEET POTATO PLANTS.—We have received a box of these plants from Mr. C. B. Murray, of Foster's Crossings, Warren Co., Ohio. They were in fine order after their long travel, and will be well cared for.

FRUIT CROP IN KENTUCKY.—Mr. Fruitt, writing from Hickory Hills, Ky., says: "The prospect for fruit in this part of the country is very flattering. I have some fruit of almost all kinds." We are glad to hear that some of our Kentucky friends have been spared by Jack Frost. Another correspondent, writing from Virginia, deplores the entire loss of the peach crop. We conclude, from all we can hear, that those who eat peaches this year will have to "pay" for them.

THE HOMESTEAD.—We learn that the *Homestead* has again passed into the hands of our good friend Mr. Weld, as publisher and editor. He is too well known to need any commendation from us. We wish him all manner of success.

A PARK IN ROXBURY.—The city fathers of Roxbury, Mass., have appropriated $70,000 for the purposes of a public park. We presume our friend, Mr. Walker, has had something to do with this. There is intelligence enough of the right kind in Roxbury to secure a park which shall be a real adornment to the city, if it is only rightly directed, which we trust it may be.

SWANS FOR THE CENTRAL PARK.—The swans presented by the city of Hamburgh to the Central Park Commissioners are now on their way here. Water birds constitute a beautiful feature of lake scenery, and we hope they will be freely introduced in the Central Park.

AMERICAN POMOLOGICAL SOCIETY.—We learn from the *Gardener's Monthly*, that the immense building of the Academy of Music at Philadelphia has been secured for the meeting of the American Pomological Society on the 11th of September next.

THE WEATHER.—There has prevailed extensively for a couple of months past a severe drought, which, with frost and snow, has been productive of much injury to fruit in various sections of the country, if our correspondence is to be relied upon. Mr. Garrett, writing from Calhoun, Henry Co., Mo., says, "We have not had rain enough to wet the ground two inches deep for two months, and last night there was frost sufficient to kill the corn and potatoes to the ground; and the leaves on some of the peach-trees, with the tender branches, are killed. Of course the tender fruits are all killed. Had it not been for this disaster, there would have been an abundance of fruit in this country."

THE PLOW BOY.—This is a new monthly of four octavo pages, published at Buffalo by H. C. White. We hope the "Boy" may soon grow up to the stature of a man.

WEEKLY SOUTHERN PLANTER.—We find this periodical omitted in our list. It is a folio of eight pages, published by Power and Cadwallader at Jackson, Miss., and edited by Wilson A. Purdom. Terms, $2 per annum.

YALE COLLEGE LECTURES.—We have already spoken of the value of these lectures. They have been published by C. M. Saxton, Barker, & Co., as reported by Mr. Olcott, with an introduction by Prof. Porter. Price 50 cents.

THE ILLUSTRATED PEAR CULTURIST.—This is a beautifully printed volume, containing prac-

tical directions for preparing the ground, planting, pruning, budding, &c., and a descriptive list of the best varieties, both for standards and dwarfs. The engravings are colored, and, with few exceptions, are well done; the outlines are particularly good. The work is for sale by C. M. Saxton, Barker, & Co., No. 25 Park Row, New York, and Starr & Co., No. 4 Main Street, New London, Conn.

WINE-MAKING.—At a recent meeting of the Farmer's Club, some interesting facts in regard to wine-making were elicited. Mr. Fuller has recently been to Cincinnati investigating the subject of grape-growing and wine-making, and from his account we make the following interesting extracts:

While trying some wines a few weeks since at the residence of J. G. Schneike of Cincinnati, who has experimented with as many varieties of native grapes as any other man in this country, he made some statements which may be interesting to the members of the Club.

He said he considered the following the best six wine grapes for the vicinity of Cincinnati, and should rank them in the following order: Delaware, Herbemont, Minor's Seedling, Lincoln, Catawba, Union Village.

With the Diana he had had but little experience; but from the wine he had made from it, he was inclined to place it next to the Delaware, in the place of the Herbemont, as that had been found to be very uncertain in its crops, as the vines are too tender for that climate.

The Delaware wine was the richest, and preserved the real *bouquet* of the grape, and it improved by age. The vintage of 1859 contained 8½ per cent. of alcohol.

Herbemont is very uncertain. No good wine was made from it from 1850 to 1859, when the crop was good. The wine is very good, quite delicate, and will not bear transporting to any great distance. Alcohol 5½ per cent.

Minor's Seedling.—This is quite foxy in flavor, but makes a fine light-colored wine. Alcohol 6 per cent.

Lincoln.—A dark-colored wine; resembles the finer grades of claret, but is much better than that we generally import. Alcohol 4½ per cent.

Catawba of 1859.—Much body and strength; light amber color. Alcohol 8 per cent.

Union Village.—A beautiful dark-colored wine; not much body or strength; will make a fine, light summer drink. Alcohol 5½ per cent.

These wines were all made from the grapes, without the addition of sugar or any other substance. The grapes are gathered when very ripe, and all green, broken, and decayed berries are picked out and thrown aside. All the apparatus that belongs to wine-making is kept in perfect order, and cleanliness is a prominent feature in the vineyards of Messrs. Mottier and Schneike, as it always should be in every establishment where good wine is expected to be made. The wines of Cincinnati have already become so celebrated that they sell for a much higher price than many of our imported wines. Large quantities of poor Rhine wines have been imported and taken to Cincinnati, and there put upon the lees of the Catawba and fermented with them, and then sold for Catawba wine, and at a profit; for Catawba will bring $1 25 per gallon, and cheap claret can be had for 50 cents, after paying the duty which has been imposed on such wines the year past.

To show that our pure native wines are not so strongly alcoholic as many of our common drinks, we will give the amount of alcohol that some of these beverages contain. Of course they vary much in different specimens, but this list will show nearly the average:

Currant wine, - -	20 per cent.	Elderberry, - - -	9 per cent.
Porter, - - -	23 "	Cider, - - - -	7½ "
Champagne, pure, -	12 "	Ale, - - - -	7 "
Gooseberry, - - -	12 "	The lowest Rhine wines,	4½ "

The range recently introduced by Bramhall and Hedge possesses some features which make

it desirable as an appendage to the country home, more especially where warm water is in demand, and this is generally the case. The consumption of fuel in actual use is comparatively small, and this is a matter of no small moment. Inventors of ranges should more frequently have an eye to the wants of the country.

NEW JERSEY STATE AGRICULTURAL SOCIETY.—The fifth annual exhibition of this Society will be held at Elizabeth on the 2d, 3d, 4th, and 5th of October next. The Prize List is now ready for distribution. Jerseymen ought to give the managers a generous support.

BROOKLYN HORTICULTURAL SOCIETY.—The June exhibition of this Society will open at the Athenæum on the 13th, we believe, of the month. Active preparations are being made for a large show, which we hope may be entirely successful.

POUGHKEEPSIE HORTICULTURAL SOCIETY.—There is an active Society at this place, which holds frequent meetings for the discussion of horticultural subjects, and seems thereby to be doing much good. We had their proceedings, but they were mislaid. We should be glad to have them again.

ST. ANTHONY'S FALLS (MINNESOTA) HORTICULTURAL SOCIETY.—Another Horticultural Society was organized in this far-distant State on the 26th of March, 1860. It is a good movement in the right direction, and has our best wishes. The constitution adopted was very brief, and substantially the same as that adopted recently by the St. Paul Society. The following officers were elected: *President*, A. E. Ames; *Vice-President*, B. O. Cutter; *Secretary*, C. L. Anderson; *Cor. Secretary*, J. G. Williams; *Treasurer*, R. W. Cummings. The following standing committees were then appointed: *Flowers*, A. E. Ames, Miss Kimball, Mrs. Atwater, D. S. B. Johnston, Mrs. Sarah H. Williams, Mrs. L. Bostwick, and Mrs. W. D. Garland. *Fruits*, A. D. Foster, D. Morrison, Capt. Rolina, D. M. Coolhaugh, Dr. Chute, D. Hurlbut, and R. J. Mendenhall. *Vegetables*, C. Hoag, Capt. Tapper, G. Reichard, R. P. Russell, S. Barnes, Edward Murphy, and Wyman Elliot. A resolution was passed, "That all editors using their papers to advance the interests of this Society, and who wish it, may become members free of expense." The Secretary informs us that, "After visiting and admiring the beautiful and well-arranged greenhouse of Dr. Ames, where a great variety of rare and costly flowers were in bloom, the Society adjourned, to meet at the same place on Wednesday, April 4th, at 2 o'clock P. M. All persons wishing to become members can either be present or send in their names. Ladies may become members, and they are respectfully solicited to coöperate with the Society. It is expected that the persons appointed on the Committees of Flowers, Fruits, and Vegetables will gather all the information within their reach, pertaining to their different departments, and report at as early a day as possible to the Society. Steps will be taken to publish everything of interest." The meetings of the Society will be held on the first Wednesday of each month.

ST. PAUL HORTICULTURAL SOCIETY.—This Society has made some alterations in its Constitution, having adopted substantially that of the Cincinnati Society. They have also made some alterations in their list of officers, which are now as follows: *President*, Alex. Buchanan. *Vice Presidents*, Alex. Ramsey, D. A. Robertson, and Henry Acker. *Recording Secretary*, Stephen Hewson. *Corresponding Secretary*, L. M. Ford. *Treasurer*, J. W. McClung. *Librarian*, E. De Mortimer. *Executive Committee*, D. C. Greenleaf, J. W. Selby, Jno. S. Prince, Mrs. J. W. Bond, and Mrs. J. W. Selby. *On Fruits*, H. F. Masterson, Henry L. Moss, N. J. T. Dana, T. M. Newson, and John W. Nichols. *On Vegetables*, M. D. Clark, J. G. Trevor, C. H. Schurmeier, L. Harding, and Wm. Wakefield.

The Executive Committee recommended the election of a number of distinguished horticulturists as honorary members; in the list is the name of the editor of this magazine, a compliment which he will be very happy to acknowledge in suitable terms. After the transaction of some

routine business, the society adjourned to meet in April. Mr. Ford exhibited a small collection of flowers, which we hope will increase in size at each succeeding meeting.

York County (Pa.) Horticultural Society.—At the annual meeting of this Society, held May 5th, the following officers were elected for the ensuing year: *President*, E. Chapin, Esq. *Vice-President*, Samuel Small. *Secretary*, Edward J. Evans. *Treasurer*, B. H. Weiser. *Managers*, Edward Jessop, Geo. A. Heckert, Thos. Williams.

The Useful and the Ornamental: a Western Manual of Practical Rural Affairs; or How to Fence the Farm and Adorn the Home, &c. By C. Thurston Chase. Chicago, S. C. Griggs & Co., 39 & 41 Lake street.—This is No. 2 of Chase's Western Rural Hand-Books, and contains much valuable information about forming and cultivating hedges, ornamental trees, shrubbery, &c. A hand-book like this is just the thing for the West.

CATALOGUES, &c., RECEIVED.

Catalogue of Dahlias and Bedding Plants, for spring of 1860—John Wilson, Nurseryman and Florist, Albany Nursery, Albany, N. Y.—Embraces a choice collection of Dahlias, Fuchsias, Verbenas, Phloxes, &c.

First Annual Report of the Proceedings of the Fruit-Growers' Society of Eastern Pennsylvania.—This report contains much valuable information, and we are glad to see it preserved in permanent form.

Periodical Catalogue of Fruit and Ornamental Trees and Plants, cultivated at the Highland Nurseries, Newburgh, near New York. By A. Saul, successor to the late A. J. Downing & Co. —A reliable, well-printed catalogue.

Bliss's Seed Catalogue, containing a choice collection of Flower, Vegetable, and Agricultural Seeds, comprising splendid assortments of German Asters, Stocks, Balsams, Zinnias, Carnations, Hollyhocks, &c., besides all other established favorites, and many new and rare seeds. Benjamin K. Bliss, Springfield, Mass.—A very extensive and choice collection, embracing all the most recent novelties.

A Descriptive Catalogue of a choice collection of Dahlias, Verbenas, Petunias, Phloxes, Carnation and Piccotee Pinks, Chrysanthemums, Bedding Geraniums, and sundry other plants. B. K. Bliss, Springfield, Mass.—Full of novelties and choice things.

Rose Lawn Nurseries, Tickfaw, La. H. A. Swasey, proprietor.—A circular setting forth the advantages of these new nurseries.

Catalogue of Trees and Plants cultivated and for sale by John W. Adams, Portland, Maine.—A short title, covering a fine collection of plants, with several good illustrations. We should like to see illustrated catalogues more common.

The Water Cure Monthly: a Magazine for Hydropathy, Physiology, and Hygiene. James E. Gross, M. D., editor. Glen Forest Water Cure: Drs. Gross and Seeley, publishers, Yellow Springs, Ohio.

The Prince Edward Island Calendar for the Year of our Lord, 1860. Charlottetown: Printed, published, and sold by George M. Haszard, south side Queen Square.

To the Vine-Growers of the United States.—The following circular has been sent to us, with a request that we would give a synopsis of it. The subject is a very important one,

and we hope will meet with the attention it deserves, especially from those directly interested in it. We have no doubt the Convention will be instrumental of much good:

At a late meeting of the "Aiken Horticultural and Vine-Growing Association," it was resolved, That a committee of five be appointed to open a correspondence with the various Vine-Growing Associations in the United States, and to ascertain the practicability of holding a Vine-Growing Convention in Aiken some time next summer; and if found practicable and expedient, that the committee take such measures to secure this object as they may think proper, and that they report the result of their proceedings to this Society at its meeting in May next.

The following gentlemen were appointed the committee: Messrs. A. De Caradeuc, Chairman; McDonald, Ravenel, Redmond, and Wood.

It is perhaps proper to state the object of the Association in proposing such a Convention, and to point out a few of the advantages to be derived from it. In the first place, it is necessary to come to some understanding about the names of the grapes now under cultivation, as it is evident that great confusion exists in that respect, most of the vines being known in different places by different names: the Black July, for instance, having five synonyms. Thus it often happens that a vine-grower reads or hears great praises of a grape whose name is unknown to him, and a description of which tallies with none that he has; he procures it at great expense, cultivates it with care for two or three years, and ultimately discovers it is identical with some other he has had a long time. This is discouraging, and has deterred many from procuring new and valuable varieties, which it would have been advantageous to have cultivated more or less extensively. This difficulty can only be obviated by a Convention such as is proposed, the best written description never being so lucid as to convey an exact idea of a fruit.

The meeting will take place at a season when the fruit at the South is ripe; all who attend are invited and requested to bring samples of their grapes, ripe if possible, and green if otherwise, with a leaf and a piece of the wood, and names and synonyms attached. Those who can not attend are requested to forward samples as above. Thus if we are assisted by the good will of a majority of vine-growers, most of the varieties in the States will be represented; their qualities, names, synonyms, sizes, degrees of maturity, etc., will be compared, and a vast amount of invaluable information derived. Names will be agreed upon, accepted, or rejected, with good authority. Persons will also be requested to bring or send samples of the wild grapes from their neighborhood in the same manner, that the different species might be finally determined upon, and each grape properly classed under its own head or type—an object of great importance to the botany of the country, and perhaps finally to the making of wine from them. We are daily getting additions to our list of natives, and unless a correct nomenclature and classification be at once made, we will be thrown into inextricable confusion, expensive and troublesome to the growers. Another object of the Convention is, to determine upon some manner of naming the different wines. The present way of calling them by the name of the grape is in direct contravention to the established rules of wine-growing countries. It has always been customary to classify wines by the name of a State, province, or district, with the different brands attached to them, according to the name of the particular locality. Thus the general name, "wines of the Rhine," comprises many particular brands, such as Hockheimer, Johannesberg, etc., etc. Bordeaux wines include Chateaux Margaux, St. Julien, La Rose, etc. The reason for this is very obvious: the same grape will make totally different wines in different places. And, again, in most wine countries (and we will no doubt adopt the same course) the grapes are mixed. A wine made from a mixture of Catawba, Isabella, and Warren could not be called by either of those names.

At present we have a hundred different Catawba wines, no two of them alike; hence the propriety of rejecting the name of the fruit in favor of the time-honored custom of naming after the state, district, or river, with brands of private names or localities. Purchasers will then know at once what they are buying, and will not be prejudiced against Catawba or Warren wine, because they have tasted worthless Catawba or Warren wine.

Independently of the foregoing, the amount of information exchanged by persons meeting in such a Convention as we propose, would truly be worth "millions to the nation," and would tend more to develop that rich culture than all that could be written.

We call, then, upon all who cultivate the grape, whether for the table or for wine, or who take an interest in the success of its culture, to assist the committee in securing their object—a convention of delegates from all the Vine-Growing Associations in the United States, and of private and separate vine-growers. Let all who can come determine at once to meet at Aiken, S. C., on the *third Tuesday in August next* (21st), there to assist in the good work—to compare their fruit and exchange their views.

Aiken has been selected as being easy of access from all quarters—North, South, East, and West—being at all times unexceptionable as to health, and a delightful summer resort for the neighboring cities, and well provided with ample accommodations.

Secretaries of the different associations connected with the vine-culture, would confer a favor by forwarding to this office, or to either of the gentlemen of the committee, the names and localities of their Societies, and all other information they may think proper.

A. DE CARADEUC, Chairman, Woodward, S. C.
Dr. J. C. W. MCDONNALD, " "
H. W. RAVENEL, Aiken, S. C.
E. J. C. WOOD, " "
February, 1860. D. REDMOND, Augusta, Ga.

Correspondence.

EDITOR OF THE HORTICULTURIST:—In each number of your instructive journal I observe you are much troubled by novices for information as to the culture of fruits, and seem to take it all patiently; so much so that I am encouraged to be "*E pluribus unum*."

Having, in the last two years, planted out a few hundred each of apple, pear, and peach, in mode "according to the books," which was to me as the Greek grammar is to the urchin, I find myself, as him, compelled occasionally to "go up" to the school-master to "ask a question."

Ain't it stupid to sidle up and say, "Mr. Ichabod! what's the definition of 'heading back,' 'cutting back,' 'shortening in,' 'training low,' and—and—a—and '*pruning*?'"

Now to the last query, may-be, I might venture to say, it *means* cutting off sprouts, defective limbs and branches, and cutting out some when there are too many. Go up head, sir! or *stay* foot! which is it? As to the others, I give it up—if I *never* get playtime.

Heading back, cutting back, shortening in, training low. Jingo! what stumpers, *when lumped*; one at a time, never hearing of the other terms, a green might understand. Do, Mr. Horticulturist, in the name of all, say precisely, succinctly, distinctly, and seriatim, what is the plain English of each of these, to me, vexed terms.

One person—vide 88th page of February number of HORTICULTURIST—says, "Prune so as to leave no *lower* limbs, no branches." What! leave no lower branches, and yet leave *any*? Indade, indade, sir, ould Ireland is among you.

Seriously, Mr. Editor, please give me your rendering of all these terms, and when and how you do each. Because, as some of my trees are three years old, some only one, and wanting the knife, (being as yet innocent thereof,) I must hurry about it, I suppose.

Figs grow very well in this latitude as standards, with a light covering of straw in winter; can you recommend a variety? and say how long before they will bear after planting. We have a fine climate and soil for fruits, and yet have precious little, though the subject is more

in our minds than heretofore. The sentiment—and a false one it is—prevails with us, that it is a *small* business; and besides, though beloved of many of you North men, the darkie conscientiously reasons that anything like fruit is as much his as his master's, just as he does his mistress's eggs, if the hens are foolish enough to lay outside of the hen-house.

A truce to my effusions, and believe me, Mr. Editor, Respectfully yours,

Kelson Co., Va. J. J. M.

[We owe J. J. M. an apology for not having promptly answered his quæries; but his letter, with several others, disappeared from our "Table," and we have only just now recovered it. The terms he alludes to are generally used with great looseness. We will try to explain them briefly. "Heading in" and "heading back" are synonymous terms; so, also, "cutting back" and "shortening in" generally mean one and the same thing, though not always. Properly, "heading in" is a generic term, relating to the whole tree or plant; as, to "head in" a tree is to cut off a portion of all the branches; "heading in" is most usually done when trees are transplanted. "Shortening" is a specific term, relating to one or more branches; as, to "shorten" a branch or limb is to cut off more or less of it: this is done in spring and fall. The term "pruning" will cover all these operations. In pruning we have several objects in view, some of which you have mentioned, and may "go up head;" but primarily we "prune" to give shape or form to a tree or plant, or to induce and promote fruitfulness: and to accomplish these two general purposes, we often prune at different seasons of the year. For the first, pruning may be done in the fall or early in spring; for the latter, we prefer, generally, the month of June; but where trees have been well cared for, "pinching" alone is sufficient. "Pinching" or "pinching in" is another term in common use not alluded to by J. J. M. This operation consists in taking off the end of a shoot with the thumb nail and forefinger, and is always performed during the growing season, while the branches are young and tender. Its object is to check the growth of the branch, and promote the formation of fruit buds. To make all these operations perfectly plain would require a number of engravings, which we may by-and-by get up. To "prune so as to leave no lower branches" is an operation analogous to cutting off a dog's tail close behind the ears. We now hope we have succeeded in giving our correspondent a general idea of the proper meaning of the terms above mentioned, and he may therefore "go out to play;" we wish we could have a good time with him. In regard to Figs, we would recommend the Brown Turkey and Black Ischia; you ought to get some fruit the second year. It is a false sentiment to consider fruit-growing a "small business" anywhere where fruit will grow, and we are getting "bravely over it" here.—ED.]

MR. EDITOR:—In your February number I find the American Persimmon called the "American Medlar." I have always regarded the medlar as a species of malus, and, like other trees of that genus, as hermaphrodite. How any one can regard the persimmon as even distinctly related to any of the apple family is difficult to conceive. The persimmon is certainly dicœcious, and the arrangement of the seeds is different from any fruit I have seen, except the date. Will not you or some of your correspondents give us information respecting the botanical character and relations of both of the above-named fruits? Having received from a nurseryman of your State several peaches, named in the bill and on the label, "Excelsior," I was surprised, when they put forth leaves, to find a part of them exhibit globose glands, and a part of them serrate leaves. Having written to him on the subject, he informs me that they are identically the same kind of peach, "one being a seedling of the other." Now I wish to be informed, through your able periodical, whether such a case was ever known as that serrated peach-trees were exactly like others with glands. GRANDÆVUS.

[Terms are frequently used with much looseness, particularly in their popular application The Persimmon and Medlar are certainly different, and yet the former has been called the American Medlar since the days of the redoubtable Captain Smith. A reason for this may

be found in the astringent qualities common to both. Another name for the Persimmon, and a more appropriate one, is the Date Plum. The Medlar belongs to Pomaceæ, the Persimmon to Ebenaceæ. Their botanical characters may be summed up thus: *Mespilus* (Medlar)—Icosandria, Digynia. Calyx 5 cleft, superior; divisions generally foliaceous, serrate; corolla 5 petalled; styles 2 to 5; drupe or berry with from 2 to 5 bony seeds. *Diospyros* (Persimmon)—Diœcia, Octandria. *Staminate Flower:* calyx 4 to 6 cleft, dilated; corolla pitcher form, 4 to 6 cleft; stamens 8, 16, or 24; often 2 anthers on a filament. *Pistillate flower:* calyx and corolla like the staminate; stigmas 4 or 5; berry 8 to 12-seeded. Varieties are sometimes met with which are seedless. Your peaches, of course, are not identical, and no such case as you mention has ever been known.—ED.]

MR. EDITOR:—I have been looking over the back vols. of the HORTICULTURIST, of which I am the fortunate possessor of a complete set, where I find almost everything I want information upon except the cultivation of Sage. Will not some of your correspondents, having experience with the plant, give your readers the best mode of culture, also the after-care and preparing for market, as I think it would be a remunerative crop in Ohio. Mr. Chorlton, in some of the back vols., gave us some excellent articles upon the cultivation of several kinds of vegetables; perhaps he might equally as well interest your readers with an article upon the cultivation of sage. By-the-by, all who have not already obtained, should avail themselves of your proposal to furnish bound vols. from 1855 to 1859, inclusive, at the low price of ten dollars; they are cheap, worth double the money. WM. HERDMAN.

Eaton, O., May 4, 1860.

[We hope Mr. Chorlton, or some other correspondent, will respond to the above in a more elaborate manner than we can indulge in at this moment. Sage is propagated by seeds and cuttings. The seeds should be sown in spring, in drills, about a quarter of an inch deep, in a carefully prepared border, and the plants, after having taken on a few leaves, transplanted into beds. The soil should be warm, well pulverized, and enriched pretty liberally with old manure. Set the plants two feet apart in rows, and the rows three feet apart; but if not hoed by hand, four feet will be necessary. The beds must be kept free from weeds by an occasional hoeing. Cuttings may be prepared in March, or before the plants have begun to grow; they may be from four to six inches long, and should be cut square off close beneath an eye or bud. Put them in a shady border, about three inches deep, and water occasionally when dry. After they have become well rooted, they may be transplanted as directed for seedlings; but it would be better not to transplant until fall. Cuttings may also be made in the fall, but not so well. Sage may likewise be propagated by dividing the old plants, and by suckers. In the fall or early in spring all the plants should be nicely trimmed or cut in. The best time to gather the leaves is just before the flowers have expanded, and this should be done when the weather is clear. The leaves should be spread out on a floor or on sheets to dry, and may afterwards be pulverized or not. The sage is a perennial, and the beds may be kept in good condition for cutting for several years.—ED.]

"Is there any plan by which a small greenhouse can be heated from the chimney of a dwelling, by means of pipes running back of the grate?"—[We know of no means by which a small greenhouse can be heated in a satisfactory manner in the way you propose. It might be done by means of a water back, but this you would find more expensive and troublesome than an independent heating arrangement. If the house is a permanent one, we would advise you to put in a small boiler and pipes, as being the best, and in the end the cheapest.—ED.]

MR. EDITOR:—I notice in your May number an article giving the writer's opinion of the requirements and efficiency of Boilers, with your promise of several other articles on the same subject. Please suggest to those correspondents who are willing to favor us with their expe-

rience in the matter, the importance of giving facts and figures, to enable us to compare their doings with our own. Let them give the size and height of the house warmed, number of feet and size of pipe, diameter or area of the fire-grate, the quantity of coal consumed in a given time, with the average temperature within and without the building during the same time. Such information (with your knowledge of the writer as an assurance of its reliability) would be of great benefit to your readers, and to practical men, worth a book filled with opinions.

Dutchess County, May 16, 1860. Yours truly, A READER.

["A Reader's" suggestion is to the point; by all means let us have the "facts and figures." We find a couple of articles on hand deficient in these particulars, and shall return them for amendment.—ED.]

MR. EDITOR:—Dear Sir, I give to you my experience in raising grapes in the way Mr. Bizzell, of Clinton, N. C., recommends. Eight years ago this summer I tried the experiment of pruning the Isabella, shortening in after three or four bunches had formed; the result was a new crop, as stated by Mr. B.; the first rotted, the second did not rot, but ripened, but of a lighter color than the first crop has been since (as before that I had not had any to get ripe). I gathered the second crop on the day of the Presidential election eight years since this coming fall; the grapes were too sour for any use, at least to eat, and I am satisfied nothing can be gained by the discovery. I see another article that I would refer to, recommending the persimmon as stocks for peach-trees. I have tried that; it will not do, and your readers can save time by not trying it; no good would result from it if it would answer, for the reason that the root of the persimmon goes too straight down in the ground, making it hard to get up, and not likely to live after being removed. Yours, HUGH MCLEAN.

Beries Creek, Harnet Co., N. C.

I did not understand the pruning of the Scuppernong as Mr. B. did, but simply that the vines would bear pruning, (which up to that time had not been agreed to by cultivators of that fine grape,) and without pruning it could not be got on an arbor. It requires but little pruning, but will bear it as well as other vines after the leaves have grown to full size; earlier it will bleed or run, and after the leaf falls will do the same. H. MCL.

[The above contains additional testimony in regard to Mr. Bizzell's mode of pruning vines, and it would seem to be little in favor of its out-door application, even at the South. We should like, however, to hear from others who have tried it. Of course the persimmon will not do for stock for the peach; we so stated quite distinctly, though in a playful manner.—ED.]

MR. EDITOR:—I was rather astonished to see Belle de Choisy set down as a poor bearer in your last number. With me it bears prodigious crops, beating, in this respect, the May Duke, which is notorious as a bearer. I am convinced that locality has a great deal to do with the success or failure of varieties. For instance, the Seckel is set down as a poor grower on the quince in many places; with me it grows remarkably well both on quince and pear, making on the former stock a growth of 2 to 4 feet a season, and a most unexceptionable form. We have lost our peach crop in this vicinity entirely this year, the buds being winter-killed; but the apple and pear promise very large crops, and are now just setting. A pear orchard planted in 1853, has a number of fruit set on Bartlett, Lawrence, Dearborn's Seedling, D'Angoulême, Easter Beurré, Seckel, (few,) Bloodgood, Washington, Belle Lucrative, Flemish Beauty, and Vicar of Winkfield. "He that plants pears plants for his heirs," but if I live till fall I shall reap specimens of the above varieties from standards, in addition to a peck of luscious Bartletts from eight trees, gathered last year. Yours truly,

Pikesville, Baltimore Co., Md., May 9, 1860. J. T. COUNCILMAN.

[The Belle de Choisy is undoubtedly, in general, a poor bearer; but it is gratifying to know that in some localities it yields a generous crop, for it is really a fine fruit. Our readers would

be doing the pomological world a good service by sending us information like the above, since it would go far to settle many mooted points. Let each make a record of the particular kinds of fruits which uniformly succeed well, being careful to admit none to this distinction that do not clearly come within its terms.—ED.]

WHAT PEACH-TREES SHALL WE PLANT?—MR. EDITOR:—Here in the Great West—on the banks of the Upper Mississippi—I am happy to say, the subject of Fruit-Culture is yearly meeting with more attention. The fact is beginning to be made manifest, that the growing of fine fruits for market is about as *paying* a business as one can be engaged in. And the further great fact is daily becoming better understood by the masses, that the fruit orchard or the fruit garden can be made to contribute very largely to the "good living" of a family. Few people heretofore seem to have been aware of that important truth. They have regarded pears and fine berries, and even apples and peaches, as mere luxuries, to be partaken of but seldom, and only to gratify the appetite, and not as articles of food to be had daily, with a little effort, in the greatest profusion, from January to December. There is a work of regeneration going on in the land in this matter. Every fruit-grower who loves his calling—every member of a Horticultural Society—should consider himself a missionary in the cause, and labor to bring about the great end. And we ought all to desire the success of the HORTICULTURIST, as one of the most efficient agents in the work. But I am wandering from my proposed subject. I come back to the question standing as the caption of this article.

A few days since, at a meeting of a Horticultural Society, the question was asked me, "If you were planting one thousand peach-trees, what proportion of them should be seedlings?" I answered somewhat hastily, "I should want eight or nine hundred of them to be such, and the remainder of the hardiest improved sorts." The object of this communication is to repeat the question to you and your readers, and to inquire how nearly was I right.

I believe it is a conceded fact that seedlings, as a general thing, are not only more hardy, but are surer bearers. This is the prevailing opinion in this region; and I state it in order to obtain the views of cultivators in other sections of the country. So far as my observation extended, during the recent winters that were so disastrous to fruit-trees, the finer varieties of the peach were the first to suffer. How far this is true, as a general fact, I am unable to say. So, in regard to their bearing qualities: seedlings are more certain bearers, and are less liable to have their fruit-buds killed by extreme changes in winter or nipping frosts in the spring.

If these be facts, then, ought we not to plant largely of seedlings, rather than of the budded varieties? I would not plant seedlings indiscriminately. Some of them—more particularly of the yellow sorts—are noted for coming true to the parent kind; and should we not do all in our power to test that quality in the peach, and, if possible, develop and improve it? Some are said to possess it in an eminent degree. We have in this region a very fine yellow sort, known as *Felt's Rareripe*,—a seedling of twenty years ago from Massachusetts, which is uniformly propagated from the seed. We have also some others, but which have not been sufficiently proven to enable me to speak confidently of their merits. Some of them are nearly, if not quite, equal to the best of the cultivated varieties.

The subject seems to be one of great importance, and worthy of more attention than it is receiving at the hands of nurserymen and others. T. G.

Hamilton, Ill.

[We are glad of this additional testimony that fruit-culture is growing more and more in favor at the West. It is an entirely mistaken notion to regard fruit as a luxury for the rich; it is, in truth, an article of food, and so ought to be common to all. If every fruit-grower, and every member of our Horticultural Societies, would regard himself, and act, as a "missionary," this happy condition would soon be brought about. In regard to Seedling Peaches, we should hardly venture to plant the large proportion our correspondent names, even though we knew

the pits had been carefully selected from the best kinds. It is true that the Peach more nearly reproduces itself from the pit than other fruits; but it is also true that the peculiar diseases to which the peach is subject are perpetuated by the pit as well as by the bud. On the whole, we should prefer to plant the largest proportion of well-known and reliable old kinds, and trust only to such seedlings as we knew to be from vigorous and healthy trees of approved varieties. Taking all things into consideration, we believe the chances of getting peach-trees free from disease are pretty equally divided between seedlings and budded stock. The utmost care is needed in both cases, to secure healthy stocks and healthy buds. We hope some of our old peach-growers will give us their views on this point.—ED.]

Editor's Drawer.

THE WINTER IN ENGLAND.—The past winter has been one of great severity in England. "Somerset," in *Turner's Florist*, thus describes its effect: This, the most memorable season which has occurred for many years, has in many places thinned out the survivors of former years, and what have been only partially killed by the frosts of winter, are likely to die outright through the influence of the bitter, parching wind now prevailing; and which, blowing from the north-east, seems to wither up vegetation as it passes over it, worse, if possible, than the frosts of winter. We are witnesses of the effects of this piercing blast daily on tender-folinged plants, and sub-hardy Coniferæ. With us Pinus apulcensis, patula, and Montezumæ are dead, or nearly so; P. ayacahuite, Lindleyana, Persica, and halepensis, much injured; Cupressus Goveniana and thurifera, browned, but not dead; C. funebris, dead (this plant is not worth a further trial); Pinus insignis, uninjured, and Pseudo-strobus ditto. I name these, as in some places they are considered tender. We have long since given up all the long-leaved kinds of Pinus, as too tender for our climate, excepting Hartwegii, which is safe here, at which I am surprised, as it is generally reported tender. All the rest, including P. Bungeana, A. Cephalonica, Webbiana, and Brunoniana, are safe; the latter only very slightly injured. Cephalonica is as hardy as Pinsapo, when it gets up a few feet in height; Webbiana is injured only by spring frosts (the cold of winter does not seem to affect it while dormant, but when the young growth commences it is tender as a cucumber); Bays and Laurestinus browned in exposed places; hybrid Rhododendrons in many places killed down to the ground, particularly the scarlet crosses; strange to say, many of the Sikkim varieties are perfectly hardy, standing untouched by the side of hybrids from garden varieties quite dead. Garrya elliptica dead in places; the said to be hardy Chusan Palm quite dead, which is a loss, as it was likely to be largely introduced into garden scenery; the gold-blotched Coltsfoot from the same country (China), killed to the ground, but where a little litter was placed over the crowns of the roots they are alive; the Euonymus and Arbutus injured only in exposed places. Lardizabala triternata, against a wall, alive. We have only a kind of purple Broccoli left, and the hard white dwarf Russian. All other vegetables, except Borecoles, were destroyed.

THE SCARLET-FRUITED AUBERGINE.—The Aubergine, or mad apple with scarlet fruit (*Solanum Pseudo-Melongena* of Tenore), has been introduced into France by M. Louesse, one of our most distinguished horticulturists, who received the seeds of it from Portugal some years ago. The first, being probably not ripe enough, did not grow; a second package gave better results. This plant is an annual; its stalk, straight and green, attaining the height of a metre and more; the alternate leaves, supported by a petiole, are many-lobed, with nerves strongly pro-

jecting on the lower surface, as rough to the touch as those of some Verbascum; they are, towards the middle of the plant, about 0.15 metres long, 0.22 wide. The flowers have nothing very remarkable, but it is not so with the fruit, which acquires, by degrees, nearly the size of a hen's egg; it is pendent, two or three together, in consequence of the bifurcation of the stalks; its form is oval and flat; the two transverse diameters are from 0.05 metres to 0.06 metres. The length is 0.07 metres; there are observed some deep, longitudinal, parallel furrows, placed with some regularity on the two flat surfaces, generally with three on each. Its color is a fine tint of aurora, or more often brilliant red scarlet. Tenore said that they are more or less mingled with green, but we have not observed this latter color. The interior consists of two irregular cells, containing numerous kidney-shaped seeds. It ripens at the beginning of autumn.

The culture of this plant is almost that of others of the same nature; it requires much heat, a rich and well-manured soil, and abundant watering. The seed is sown on a bed, at the end of March or beginning of April, and replanted in beds. M. Louesse advises nipping the end of the shoots, and cutting off a certain number of useless branches; thus favoring the development of the fruit. It is very probable this plant could be cultivated in pots, as the *Solanum ovigerum*. The *Solanum Gilo* of Raddi, regarded at first by Lenore as a distinct species, is only a simple variety of the one of which we are speaking; it is distinguished from it, upon the authority of Tenore, by the color of the fruit, and likewise by its sour and sharp taste, while the fruit of the Solanum Pseudo-melongena is insipid. Dunal informs us, however, that this fruit is esteemed, and the plant cultivated in all the Spanish and Brazilian provinces bordering on the tropics. It must here necessarily acknowledge the influence of the climate. Under that of Paris, there is no reason to suppose that the fruit acquires the proper qualities to be eatable, and the scarlet Aubergine remains simply an ornamental plant, which one could associate with or substitute for the egg-plant (*Solanum ovigerum* of Dunal). M. Louesse has observed that the vulgar name of Aubergine, Tomate, is false, and relates more probably to the *Solanum Texanium*, a neighboring species, the fruit of which is flat and projecting at the sides, and the stalk deep violet, and full of thorns.—ARISTIDE DUPINS, in *Revue Horticole*.

THE SUGAR CANTALOUPE.—Facility of cultivation, abundant production, and, above all, a most agreeable flavor, assign to the Cantaloupes the first rank among all the races of Melons. The markets—those of Paris, at least—have nothing superior; and in the establishment of the rich amateur, with the epicure who is proud of assembling in his kitchen garden the best varieties of this delicious fruit, the Cantaloupes always form a species of basis or staple, that which is cultivated on the largest scale; the others, so to speak, are only accessories. From the well-merited predilection of which it is the object, it does not, however, follow, that the Cantaloupe of any variety is a fruit of unexceptionable quality in every respect; it presents, on the contrary, certain deficiencies, for which, it is surprising to know, no remedy has been sought for a long time past. Thus, without speaking of its variable quality—which often requires that several fruit shall be cut in order to find one really good—it must be acknowledged, as a serious fault, that the rind is so thick that it is rare to find the flesh equal to half the weight of the fruit; there is therefore a considerable loss, which ought, if possible, to be avoided.

An agriculturist of the District of Château-Renard (Loiret), M. Bailly, turning to account the extreme facility with which the Melons may be artificially fecundated among themselves, has produced, by the aid of the Prescott Cantaloupe and of the Sugar Melon of Tours, a mixed race, which, from its double origin, he has named *Sugar Cantaloupe*. This variety shows itself exempt from the defects noted in the previous paragraph, and for several years has always reproduced itself with such uniformity that it may now be considered as perfectly fixed. Its exterior characteristics are precisely those of a Cantaloupe. Its form is a spheroid, slightly flattened, with sides somewhat ridged, entirely free from the scales or tubercles found on several races of Cantaloupes; the rind is quite smooth, of a pale green, passing to straw yellow at

maturity; the flesh, of a deep orange, equals in bulk or in weight more than three-quarters of the fruit; it is fragrant, melting, very sugary, and extends, without any line of separation, quite to the rind, which never exceeds 1 centimetre in thickness.

We do not hesitate to declare the Sugar Cantaloupe superior to every other Cantaloupe, and it appears to us impossible that it should not be deservedly appreciated by all those who will give it a trial.

M. Bailly has kindly sent us a paper on the cultivation of this melon in the open ground, which we reproduce textually. It contains information which it appears to us must be useful to those who are engaged in the cultivation of melons for market, and who operate on a large extent of ground.

"This variety of Melon (Sugar Cantaloupe) is not more difficult to cultivate than the other varieties of Cantaloupe. For early crops, I sow it in pots placed in a hotbed in the month of January or February. I make two pinchings, to determine the position of 4 principal branches. Afterwards I plant them out where they are to remain, on a new hotbed, covered with a frame or bell glass. Each plant should have a space of 1 square metre at least. If these are well managed they will give ripe fruit in the month of June. All pruning should be avoided, but the branches should be so trained as to take a proper direction for entirely covering the soil.

"The cultivation in the open ground is more simple, less costly, and gives a larger yield of fruit of very much better quality. It can be practised in a garden or in the field, provided the soil is of good quality. The ground should be covered with good manure to the depth of 5 or 6 centimetres; this is to be deeply and thoroughly worked in by the spade. Then make, at distances of 1 3-10 to 1 5-10 metres, holes of 30 centimetres square by 15 centimetres deep, which are to be filled with thoroughly rotted manure, and on this are set out the melon plants previously brought forward in a hotbed. The plants are set out from the beginning to the end of May. No pruning of any kind is to be practised, but the 4 or 5 principal branches are to have a suitable direction given them. From the commencement of the heats in June the earth should be covered with a coating of manure, and the plants should be watered abundantly twice a week. The only care required until the maturity of the fruit—which commences in August—is to keep the ground free from weeds, and to water during droughts. Under the influence of the summer heats, the earth becomes entirely covered with the broad leaves, hiding the fruit and sheltering it from the intensity of the sun's rays. It then grows and ripens in the shade, nourished by the sap, which, circulating through the numerous vegetable organs, does not reach the fruit until after having been properly elaborated. The melons cultivated in this manner acquire a richness and a fragrance not found in those subjected to continued mutilations for the purpose of enlarging and improving the fruit. I consider the frequent cutting of the branches a very injurious operation, and I can not do otherwise than recommend entire abstinence from it. Each melon plant, cultivated as I have just pointed out, will ripen 3 or 4 fruit, weighing about 3 kilogrammes a piece. They must be allowed to ripen under the leaves, and must not be exposed to the sun, as this burns them, hastens the maturity too rapidly, and prevents them from acquiring those good qualities which time alone can give. Notwithstanding its origin in a warm climate, the melon does not like too high a temperature, and the fruit is better in France than in Africa. This shows without doubt that the maturity is too rapid in the latter.—*From the Revue Horticole.*

Metre=39½ ins., nearly. Centimetre=4-10 in., nearly. Kilogramme=2 1-5 lbs. avoirdupois.

N°1. Early Sweedish.
2. Triumph of Cumberland.
3. Baumann's May.
N°4. Bunch Tartarian.
5. Ble Monstreuse de Menzel.
6. Black Eagle.

FOR THE HORTICULTURIST

Published by C.M. SAXTON New York.